

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA, THE
STATES OF CALIFORNIA, FLORIDA,
GEORGIA, MARYLAND,
MASSACHUSETTS, MINNESOTA, NEW
JERSEY, NEW YORK, NORTH
CAROLINA, RHODE ISLAND,
TENNESSEE, VIRGINIA *ex rel.* STEPHEN
EIMERS,

Plaintiffs,

v.

LINDSAY CORPORATION, SAFE
TECHNOLOGIES, INC., LINDSAY
TRANSPORTATION SOLUTIONS,
BARRIER SYSTEMS, INC., VALMONT
CORPORATION, VALMONT
TRANSPORTATION, ARMORFLEX
CORP.,

Defendants.

Case No: 19-CV-286 MAD

**FILED IN CAMERA AND
UNDER SEAL**

DO NOT ENTER INTO PACER

FALSE CLAIMS ACT COMPLAINT

FIRST AMENDED COMPLAINT

On behalf of the United States of America (“United States”), the states of California, Florida, Georgia, Maryland, Massachusetts, Massachusetts, Minnesota, New Jersey, New York, North Carolina, Rhode Island, Tennessee, Virginia (collectively “Plaintiff States”) (and together with the United States and Plaintiff States, the “Government”) the Plaintiff-Relator Stephen Eimers (“Mr. Eimers” or “Relator”) files this *qui tam* complaint against Defendants Lindsay Corporation, Safe Technologies, Inc., Lindsay Transportation Solutions, Barrier Systems, Inc. (together “Lindsay Defendants”), Valmont Corporation, Valmont Transportation, and Armorflex Corp. (together “Armorflex Defendants”)(collectively with the Lindsay Defendants, the “Defendants”), pursuant to the False Claims Act, 31 U.S.C. §§ 3729-3733 *et seq.* (the “FCA”),

and the False Claims Acts of the Plaintiff States described herein, and alleges as follows:

I. INTRODUCTION

1. As set forth herein Defendants' fraud involved selling non-conforming, substandard goods for use on state and federal highways.

2. This case involves a massive fraud and cover up by Defendants perpetrated over many years on state governments that purchased, using state and federal funds, the X-Lite end terminal and installed it on state and federal highway systems. The Lindsay Defendants conspired with the Armorflex Defendants to perpetrate and to cover up the fraud. Defendants fraudulently induced and caused State Departments of Transportation ("State DOTs") to use state and federal highway funds to acquire, purchase and install X-Lite end terminals based on false representations, including but not limited to the following false representations:

- a. That the X-Lite sold to State DOTs was the same X-Lite that was crash tested in 2010 pursuant to NCHRP Report 350;
- b. that the X-Lite sold to State DOTs was stable, less likely to cause rail buckling, had a reduced propensity to pierce vehicles compared to other end terminals; that it had little or no debris field after an impact, and that the impact head could not become disconnected from the rail in an impact;
- c. That the X-Lite sold to State DOTs was made of the same materials and had "essentially the same chemistry, mechanical properties, and geometry" as the X-Lite that was crash tested in 2010;

3. Defendants also perpetrated their fraud by:

- a. Removing from X-Lites sold to State DOTs essential components necessary to the design and successful operation of the X-Lite;
- b. Using cheaper, poor-quality materials in place of materials used in the X-Lite units that were crash tested;
- c. Replacing essential components of the X-Lite with cheaper parts and materials that did not conform with design specifications for the X-Lite;
- d. Misrepresenting the energy-absorbing capacity and features of the X-Lite to induce State DOTs to purchase X-Lites for installations that Defendants knew exceeded the X-Lite's

capacity and design and would likely lead to injuries or death when the X-Lite was impacted by motorists;

- e. Consistently misrepresenting the quality of materials used and the performance of the X-Lite being sold to State DOTs;
- f. Making hundreds of unannounced and undisclosed material modifications to the X-Lite from 2011 through 2018 to the X-Lite to further cut the Lindsay Defendants' costs and/or to enable a cheaper manufacturing process by the Lindsay Defendants, without notifying State DOTs or disclosing the changes;
- g. Concealing from State DOTs failed crash tests run in 2015 and 2016 by the Lindsay Defendants. Among other reasons, the Lindsay Defendants hid this information to conceal evidence that the version of the X-Lite being sold to State DOTs was not able to pass NCHRP Report 350 crash tests;
- h. Making material misrepresentations about the character, quality and makeup of the X-Lite that was crash tested in 2010 in order to establish a false and inaccurate record that would enable Defendants to sell deficient X-Lites to unsuspecting State DOTs.

4. Defendants' cover up began at or before the time Defendants crash tested the X-Lite in 2010 and is ongoing. The purpose of the cover up is to obscure and hide Defendants' conspiracy to defraud the United States and state governments of state and federal highway funds by selling a product to State DOTs around the country that Defendants knew to be substandard, non-conforming and defective.

5. The facts of Defendants' conspiracy and cover up are outlined in detail in Section XI below.

6. The facts of Defendants' undisclosed changes to the X-Lite are outlined in Sections V-VI below and in **Exhibit A** hereto.

7. The materiality of Defendants' fraud is outlined in Section VII, below.

JURISDICTION AND VENUE

8. This Court has jurisdiction pursuant to 31 U.S.C. § 3732 and concurrent jurisdiction over state law claims because those claims arise from the same transaction or occurrence giving rise to the claims brought under the FCA.

9. Additionally, pursuant to 28 U.S.C. § 1331, this Court has original jurisdiction over the subject matter of this civil action because it arises under the laws of the United States, in particular the FCA. Pursuant to 28 U.S.C. § 1367, this Court has supplemental jurisdiction over the remaining claims on the grounds that those claims are so related to the claims within this Court's original jurisdiction that they form part of the same case or controversy under Article III of the United States Constitution.

10. At all relevant times, Defendants regularly conducted substantial business within the state of New York, and made, and are making, significant sales and claims for reimbursement in the state of New York, within this judicial district, including claims directly related to the claims in this action.

11. Venue is proper in this District pursuant to 31 U.S.C. § 3732(a), which provides that any action brought under § 3730 may be brought in any judicial district in which the defendant or, in the case of multiple defendants, any one defendant, can be found, resides, transacts business, or in which any act proscribed by § 3729 occurred. The acts complained of herein occurred in the state of New York within this judicial district, as well as nationwide. Additionally, venue is proper in this district pursuant to 28 U.S.C. § 1391(b)(2).

FILING UNDER SEAL

12. Under the FCA, as well as the False Claims Acts of states pleaded herein, pleadings are to be filed *in camera* and remain under seal for a period of at least sixty (60) days and shall not be served on Defendants until the Court so orders.

13. As required by 31 U.S.C. § 3730(b)(2), Relator voluntarily submitted prior to the filing of this Complaint a confidential written disclosure statement (subject to the attorney-client privilege) to the United States Government, containing materials, evidence, and information in its possession pertaining to the allegations contained in the this Complaint. Relator also

voluntarily submitted a confidential written disclosure statement and this Complaint to the states under whose FCAs this action is partially brought.

II. THE PARTIES.

14. **Relator/Plaintiff:** Mr. Eimers is a small-business owner and resident of Lenoir City, Tennessee. Relator is the original source of the facts and information hereinafter set forth concerning the activities of the Defendants relative to the X-Lite guardrail terminal being manufactured and sold by Defendants, which are improperly being sold to states under federal and state highway reimbursement programs. The facts averred herein are based upon the personal observations of Mr. Eimers, his personal and extensive review of documents and information he has gathered from multiple sources, including from state and federal officials, contractors and Defendants, along with Mr. Eimers' meticulous investigation of the roadside hardware actually installed by Defendants in the form of the X-Lite end terminal on roads throughout the United States, after the death of his daughter as a result of a collision with an X-Lite terminal. Mr. Eimers discovered undisclosed modifications and changes to the X-Lite by (1) comparing the X-Lites on the road throughout the country with the photos, descriptions and videos of the X-Lite terminals tested in 2010 by Lindsay to gain federal approval for the X-Lite, and by (2) comparing Lindsay's X-Lite installation instructions with the photos, videos and descriptions of the testing installations provided by Lindsay to the FHWA in 2010 in order to gain federal approval for the terminal.

DEFENDANTS

15. Lindsay Corporation, 2222 North 111th Street, Omaha, NE 68164, the current trademark owner and manufacturer of the X-Lite.

16. Safe Technologies, Inc., 170 River Road, Rio Vista, CA 94571, Lindsay's wholly owned subsidiary that did all of the reported crash testing on the X-Lite.

17. Lindsay Transportation Solutions of 180 River Road | Rio Vista, CA 94571, a subsidiary of Lindsay Corporation and the manufacturer of the X-Lite.

18. Barrier Systems, of 180 River Road | Rio Vista, CA 94571, upon information and belief, a marketing and sales corporation for the X-Lite which has now merged with Lindsay Corporation. Barrier Systems sought FHWA approval for changes made to the X-Lite in 2013.

19. Valmont Corporation/Valmont Transportation, Omaha, Nebraska, upon information and belief, purchased patent from ArmorFlex Corp. in 2013.

20. ArmorFlex Corporation, New Zealand, original patent owner of the X-Lite and the entity that first requested that the FHWA review crash test results of the X-Lite in 2010 in order to obtain eligibility for use on federal highways.

III. THE FEDERAL AID HIGHWAY PROGRAM.

23 The Federal Highway Administration (FHWA) supports State and local governments in the design, construction, and maintenance of the Nation's highway system (Federal Aid Highway Program) and various federally and tribal owned lands (Federal Lands Highway Program). State and local governments construct and maintain the highways, but the FHWA provides oversight and funding.

24 The FHWA will reimburse States for the installation of roadside safety devices, including guardrail end terminals, only if the devices meet the applicable crash test criteria. As a service to the states, the FHWA provides technical assistance to evaluate the crashworthiness of roadside safety hardware and by writing corresponding Federal-aid reimbursement eligibility letters.

25 “The Federal share payable on account of any project [on the interstate highway system] for . . . installation of traffic signs, traffic lights, guardrails, impact attenuators, concrete barrier end treatments . . . may amount to 100 percent of the cost of construction of such projects” as long as such projects are not more than 10 percent of “all Federal-aid programs for any fiscal year.”

23 U.S.C.A. § 120(c)(1).

26 Guardrail terminal-head systems, such as the X-Lite system, are defined in federal law and in DOT regulations as “**innovative crashworthy safety barriers**” and “**positive protective devices**”, which are safety barriers that been shown to the FHWA to “meet or surpass[] the requirements of the National Cooperative Highway Research Program 350 (“NCHRP Report 350”)”.

27 Under Chapter I of the laws governing the Department of Transportation’s Federal-Aid Highways, an “**innovative crashworthy safety barrier**” is defined as a “barrier, other than a guardrail or guiderail . . . that meets or surpasses the requirements of the National Cooperative Highway Research Program 350 [NCHRP Report 350] for longitudinal barriers.” 23 U.S.C. § 109(c).

28 Section 109 also requires that “Not less than 2 ½ percent of the mileage of new or replacement permanent or temporary crashworthy barriers included in awarded contracts along Federal-aid highways within the boundaries of a State in each calendar year shall be **innovative crashworthy safety barriers**.” 23 U.S.C. § 109(a). Each state must “annually certify to the Secretary [of Transportation] its compliance with the requirements of this section.” *Id.*

29 Under Federal Highway Administration’s (“FHWA”) regulations, 23 C.F.R. § 630.1104, “**Positive Protection Devices**” for a highway are defined as “devices that contain and/or redirect vehicles and meet the crashworthiness evaluation criteria contained in National Cooperative Highway Research Program (**NCHRP**) **Report 350**, Recommended Procedures for the Safety Performance Evaluation of Highway Features, 1993, Transportation Research Board, National Research Council.”

30 Under 23 U.S.C.A. § 109(e), pertaining to the “Installation of Safety Devices No funds shall be approved for expenditure on any Federal-aid highway, or highway affected under chapter 2 of this title, unless proper safety protective devices complying with safety standards determined by the Secretary at that time as being adequate shall be installed . . . “

31 Between 1998 and 2010, the Secretary of the Department of Transportation through the FHWA required new highway safety features to be tested according to NCHRP Report 350.¹ NCHRP Report 350 provides detailed requirements regarding almost every parameter of the required tests including, inter alia, how the tests are to be performed, requirements for test vehicles, test conditions, and the data to be collected.

32 Under 23 CFR 637.209(a)(5), after “September 24, 2009, laboratories that perform crash testing for acceptance of roadside hardware by the FHWA shall be accredited by a laboratory accreditation body that is recognized by the National Cooperation for Laboratory Accreditation (NACLA), is a signatory to the Asia Pacific Laboratory Accreditation Cooperation (APLAC) Mutual Recognition Arrangement (MRA), is a signatory to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA), or another accreditation body acceptable to FHWA.”

33 If manufacturers choose to seek FHWA acceptance and Federal-aid eligibility letters from the FHWA, the agency has set out specific guidelines for demonstrating compliance with NCHRP Report 350, as required by 23 U.S.C. § 109 and 23 C.F.R. § 630.1104, in the FHWA policy memo: Identifying Acceptable Highway Safety Features available at <http://www.fhwa.dot.gov/legregs/directives/policy/ra.htm>.

34 Submissions to the FHWA by a manufacturer seeking the FHWA’s approval for a highway feature as crashworthy and acceptable for use on the National Highway System “must fully identify: a) the feature(s) tested; b) the conditions and results of the testing; and, if acceptance is being sought for any variations in design or construction details or procedures from those covered in the documentation of the testing of the feature, c) the complete design,

¹ After January 1, 2011 new highway safety features have been evaluated according to the American Association of State Highway and Transportation Officials’ Manual for Assessing Safety Hardware (“MASH”); however, equipment that had previously been approved pursuant to NCHRP was not required to be retested or certified.

construction, and installation details and specifications for the version(s) of the feature for which acceptance is being sought.” *Id.*

35 The FHWA also requires two copies of a “high quality, reproducible, letter-size, engineering drawing or set of drawings showing all pertinent details and installation requirements of the version(s) of the feature for which acceptance is being sought are to be included with the request for acceptance.” *Id.*

36 “The objective is to accurately report the as-built foundation conditions, test article geometry, and material characteristics of what was actually tested, not just the nominal design dimensions and specifications for the feature, which, as indicated below, should also be reported. Ideally, all materials for a test installation should be examined before they are installed to ensure that they are representative of what will actually be supplied in service, with special vigilance for elements that, while within specifications, might falsely represent performance under service conditions.” FHWA Policy Memos: Identifying Acceptable Highway Safety Features, at 8.

37 Once a manufacturer receives approval for a roadside safety device from the FHWA, the FHWA also attaches specific conditions in its eligibility letters, including that corporations must by “certify to potential users that the hardware furnished has essentially the same chemistry, mechanical properties, and geometry as that submitted for acceptance, and that it will meet the crashworthiness requirements of the FHWA and the NCHRP Report 350.”

38 FHWA eligibility letters also require, as a condition of acceptance, that “Any changes that may influence system conformance with [the applicable safety standard, such as NCHRP Report 350] will require a new reimbursement eligibility letter.”

39 Under 18 U.S.C. 1001, “whoever, in any matter within the jurisdiction of the executive, legislative, or judicial branch of the Government of the United States, knowingly and willfully (1) falsifies, conceals, or covers up by any trick, scheme, or device a material fact;

(2) makes any materially false, fictitious, or fraudulent statement or representation; or
(3) makes or uses any false writing or document knowing the same to contain any
materially false, fictitious, or fraudulent statement or entry, are subject to criminal penalties and
fines.

40 Under the federal Transportation Act, 18 U.S.C. 1020 it is illegal to make false
statements or representations or to submit or make false certifications regarding, among other
things, the *character or quality* of the material to be used on a federal highway or construction
project that is either be submitted to the Secretary of Transportation for approval or on any
project under the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and
supplemented.

41 Specifically, the Transportation Act, 18 U.S.C. 1020 provides criminal penalties
and fines for a violation by any officers, agents, employees of the United States, employees of
any state or territory, or “whoever, whether a person, association, firm or corporation, who
knowingly makes any false statement, false representation, or false report as to the character,
quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work
performed or to be performed, or the cost thereof in connection with the submission of plans,
maps, specifications, contracts, or costs of construction on any highway or related project
submitted for approval to the Secretary of Transportation; or whoever knowingly makes any
false statement or false representation as to material fact in any statement, certificate, or report
submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat.
355), as amended and supplemented.

42 The Office of Inspector General of the federal Transportation Department and the
United States Department of Justice each year prosecute dozens of violations of 18 U.S.C. 1001
and 18 U.S.C. 1020, leading to fines, criminal penalties and debarment of individuals,

contractors and manufacturers providing materials to federal transportation projects. See

http://www.ltrc.lsu.edu/ltrc_13/pdf/presentations/S54_Bid%20Collusion_LTC2013.pdf

43 As of 2010, the Department of Transportation identified false statements and false claims connected to transportation projects as two of the top management challenges facing the department.²

44 In a 2010 report, the DOT reported that “with the number of highway and transit projects receiving Federal assistance, it is imperative that the Department and Operating Administrations aggressively combat fraud, waste, and abuse. Fraud awareness education and vigilant oversight are needed to identify and prevent common fraud schemes, such as bid rigging, price fixing, product substitution, bribery and kickbacks, conflicts of interest, false statements and false claims, labor and materials overbilling, and disadvantaged business enterprise fraud. **Of particular concern are schemes that compromise safety.**”

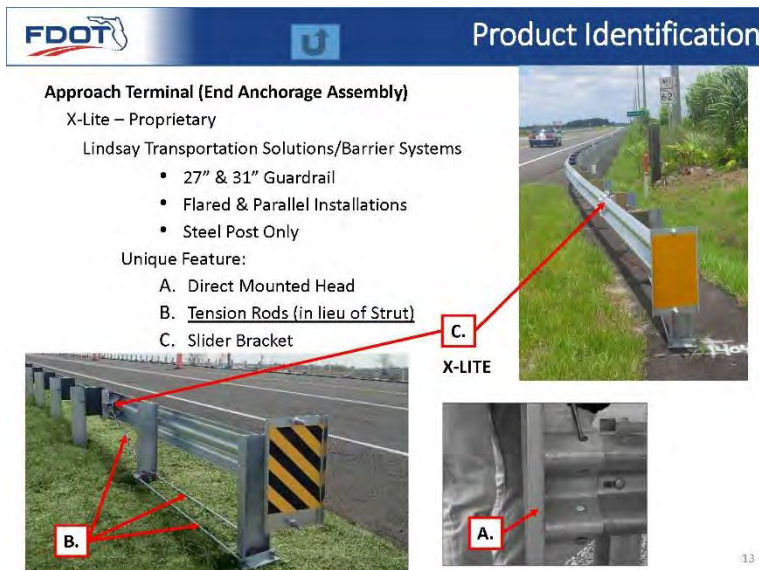
45 For example, the report describes “a Utah corporation specializing in the installation of highway safety devices was sentenced to 36 months of probation, ordered to pay a fine of \$21,916, and \$31,485.45 in restitution for falsifying certificates of compliance related to the installation of highway crash cushions of a FHWA-funded project. The company admitted to submitting false certificates even though it knew that the installation of these devices did not meet contract specifications.” *Id.*

46 Section 106(c) of Title 23, United States Code (U.S.C.), authorizes States to assume project responsibilities for design, plans, specifications, estimates, contract awards, and inspections for projects that receive funding under Title 23, U.S.C., and are on the National Highway System (NHS), including projects on the Interstate System. The States may assume

²https://www.faa.gov/about/office_org/headquarters_offices/aba/media/DOT%20FY%202011%20Management%20Challenges.pdf

these responsibilities unless FHWA, acting under a delegation of authority from the Secretary, determines that the assumption is not appropriate (23 U.S.C. 106(c)(1)). For non-NHS projects, States must assume such responsibilities (23 U.S.C. 106(c)(2)).

IV. THE X-LITE SYSTEM



47 Defendants in their sales and marketing materials describe the X-Lite’s function as “designed to absorb or re-direct the impact errant vehicle in accordance with NCHRP Report 350 guidelines . . . The X-Lite terminal energy of an utilizes a telescoping, non-extruding design.” Unlike extruding designs (like the ET-Plus) the terminal head of the X-Lite simply bolts to the blunt end of the first guardrail panel.



Figure 1: The X-Lite Terminal Head

48 The system consists of an impact head, two ground struts, a ground strut angle, a slider panel and slider bracket, a BCT cable (connected to the slider bracket), a “unique post” and three crimped posts. The X-Lite is sold with three 13-foot guardrail panels and was approved as a 37 ½ foot³ system.

49 When impacted by a vehicle at the terminal head, the ground struts and the BCT cable of the X-Lite are designed to provide initial resistance to decelerate the vehicle, and then are designed to release, allowing the slider bracket and slider panel to move along the length of the guardrail.

50 The terminal head is supposed to stay in place between the blunt ends of the guardrail and the vehicle, and to push the slider bracket along the back side of the guardrail to shear off the bolts that connect the guardrail panels to the posts. The slider panel is designed to collect and hold the guardrail panels together so that – once released from the bolts by the slider bracket – all guardrail panels will theoretically stay together and move down the rail together. In its literature, Lindsay refers to the operation of the slider bracket, slider panel and guardrail as “telescoping” and “nesting” the guardrail. The nesting function is important to prevent the guardrail from elbowing and turning into a spear that pierces the vehicle and maims or kills drivers or passengers.

V. DEFENDANTS’ FALSE CLAIMS AND FRAUDULENT OMISSIONS TO OBTAIN APPROVAL FOR THE X-LITE FOR USE ON STATE AND FEDERALLY FUNDED HIGHWAYS.

51 Defendants in a letter dated December 20, 2010 (“December 2010 Letter”) submitted drawings and crash test reports for the X-Lite to the FHWA for approval of the

³ Because the guardrail panels are overlapped about 6 inches where they meet and are bolted together at posts, the effective length of each panel is about 12.5 feet.

X-Lite system for use on the National Highway System (NHS) by the Federal Highway Administration (FHWA) under NCHRP Report 350.

52 The December 2010 Letter, along with its enclosures, made false claims and representations about (a) the X-Lite system that was crash tested, (b) the configuration of the X-Lite system that would be placed on the nation's roadways, and (c) the performance of the X-Lite in crash tests.⁴

53 In addition, after receiving approval from the FHWA for the X-Lite system to be placed on the NHS on September 7, 2011 ("September 2011 FHWA Approval"), sometime in 2013 Defendants made material changes to the X-Lite system without ever notifying or disclosing those changes to the FHWA, the states, or contractors.

54 Specifically, Defendants made multiple undisclosed changes including (1) a new slider panel, (2) a 10-inch bolt through Post #7, and (3) the sale of an unapproved 50-foot X-Lite system, when only a 37.5-foot system had been approved by the FHWA and accepted for use on the NHS in eligibility letter cc120. See also **Exhibit A** hereto.

VI. THE UNDISCLOSED CHANGES.

The following are specific examples of Defendants' undisclosed modifications to the X-Lite. Additional undisclosed changes are set forth in **Exhibit A** hereto.

A. THE SLIDER PANEL

55 The slider panel, as shown below, has a front and back section that are bolted together through brackets at the top and bottom of the slider panel, wrapping the guardrail front-to-back.

⁴ All of the 2010 crash testing submitted to the FHWA for approval of the X-Lite was conducted by Safe Technologies, Inc., a wholly owned subsidiary of Lindsay.



Figure 2: Slider Panel, Front Side (Left) and Back Side (Right). The Slider Bracket is also shown in the photo on the right.

56 As the slider panel is pushed down the rail by the vehicle, the slider panel is designed to gather (or telescope) the guardrail until the vehicle is stopped. If it works correctly, the X-Lite's slider panel gathers or captures all of the panels of the guardrail in its grip, shielding a vehicle from potentially fatal contact with the blunt end of a guardrail panel.

57 The slider panel used by Lindsay in the X-Lite since 2013 is not the slider panel that was used in the crash testing in 2010.

58 In 2013 Lindsay made undisclosed changes to the slider panel by welding an additional 1.5 inches of hot-rolled steel to the right (impact) side of the slider panel. The slider panel is shown in the comparison photos below. The version used in 2013 is on the left and the version used after 2014 is on the right.



59 The Lindsay Defendants’ change to the slider panel is confirmed by **Exhibit B** hereto, an Engineering Change Notice (“ECN”), ECN 2102, that documents that the change was made by an external vendor to facilitate manufacturing and eliminate the need to “bend” the side of the slider panel. The bend was replaced with a welded-on side piece.

60 **Exhibit B** also demonstrates that the Lindsay Defendants prepared two different versions of ECN 2102. One version of 2102 documented only the addition of an arrow at the top of the Slider Panel, while the second version of 2102 confirms that the slider panel was originally tested and manufactured from a single piece of steel but was altered in 2013 to instead be manufactured from two pieces of steel welded together.

61 The change was also made by a vendor without any engineering analysis. Crash tests in 2015 and 2016 using the modified slider panel failed. The Lindsay Defendants ran the crash tests but concealed the fact of the crash tests as well as their results from State DOTs.

62 Since the change to the slider panel there have been documented accidents in which the altered slider panel has snagged, causing the slider panel to hinge and spear a

vehicle. There have been fatal spearing accidents in Massachusetts, Missouri and Tennessee that have involved X-Lite installations that have used the sliding bracket with undisclosed changes.



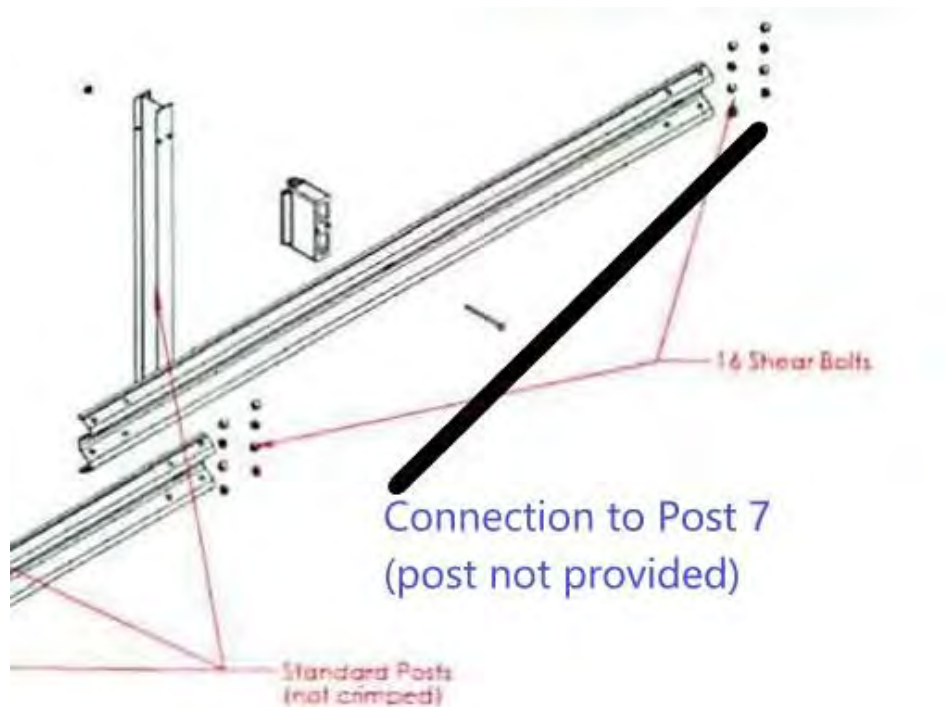
Figure 2: Fatal crash involving the altered Slider Panel

B. BOLT CONFIGURATION

LINDSAY TESTED A DIFFERENT BOLT CONFIGURATION THAN THE ONE DISCLOSED TO THE FHWA AND SOLD TO STATES.

57. The bolt configuration of the X-Lite sold by Lindsay since 2011 is different than the bolt configuration crash tested in 2010 and disclosed to the FHWA in 2010 in order to obtain approval to sell the X-Lite as part of the Federal Highway program.

58. As detailed below, all tangent crash tests run on the X-Lite by Lindsay were run using a 10-inch bolt attaching Post 7 to the guardrail. Yet this is not the bolt configuration reported by Lindsay to the FHWA in their tangent drawing, below, which shows only **8 shear bolts** at Post 7, and **no bolt to the post**.



FHWA DRAWING

Figure 3: FHWA Drawing Submitted for Approval in 2010 shows only 8 shear bolts at Post 7, and no Post bolt.

59 The shear bolts simply fasten two pieces of guardrail together where the guardrail ends meet at Post 5 and Post 7 – the shear bolts **do not** attach the guardrail to the posts. Only a post bolt, such as the 10-inch bolt used in the crash testing, attaches the guardrail to the posts. Furthermore, the shear bolts are designed to “fail” under pressure, such as when a car hits the end of the terminal, theoretically allowing the guardrail to slide and nest within the slider panel as the car pushes it down the rail.

a. The X-Lite Patent Warns that a 10-inch Bolt Attaching the Guardrail to Post 7 is Critical to the X-Lite’s Performance.

60 The patent for the X-Lite states that a single (10-inch) bolt attaching the guardrail to Post 7 is necessary for safety purposes on the X-Lite whenever two sets of shear bolts are used on the system. When one set of shear bolts is used at Post 5 and

another set of shear bolts is used at Post 7, as it is in the tangent X-Lite, the patent states that it is “impossible to control the order in which the sets of shear bolts [will] fail” unless a 10-inch post bolt is used at Post 7.

4

As noted in the above background art discussion the inventor had previously found it critical to only have one set of shear bolts (the first set—shown by the arrow marked 1st) connecting rails 2 and 3 as it was found if other sets of shear bolts were used to connect downstream rails such as rails 3 and 4 (the second set—shown by the arrow marked 2nd) it was impossible to control the order in which the sets of shear bolts would fail. In some instances the 1st and 2nd set could fail simultaneously, or the 2nd set could fail before the first set, typically both mis-events being triggered as the impact head 1000 on the downstream end of the first rail (rail 1) impacted with the upstream end of the second rail (rail 2). However, with the guardrail configured as shown in FIG. 1 the order in which the sets of shear bolts fail is controlled so the 1st set fails before the 2nd set. The 2nd set failing when the impact head 1000 impacts with the upstream end of the third rail (rail 3) during telescoping of the rails. The impact head 1000 impacting with the upstream end of the rails can also trigger additional upstream joints to fail sequentially depending on the force to be absorbed and length of rails.

Thus, given these difficulties with controlling with certainty the sequential order in which the sets of shear bolts need to fail resulted in prior art guardrails only having one set of shear bolts being employed.

The present invention as shown in FIG. 1 has now overcome this problem and allows a greater amount of controlled telescoping to occur and enables more energy to be absorbed during head on impact situations.

In FIG. 4 there is shown a shear bolt 6 which is around 35 mm in length and which has a head 6a and a shaft 6b. A v-shaped notch 6c circumscribes the shaft 6b adjacent where it joins the head 6a. By way of comparison a standard post bolt is around 240-250 mm in length depending on whether it is screwed into the support block 200 shown in FIG. 1 or whether it passes through the support block 200 to effectively connect the rails to the support post 20 via engaging a nut.

From the Patent applied for in 2012, issued in 2015.

Prior art had found it “critical to only have one set of shear bolts . . . as it was found if other sets of shear bolts were used to connect downstream rails such as rails 3 and 4 . . . it was impossible to control the order in which the sets of shear bolts would fail.”

“However, with the guardrail configured as shown in FIG 1 [with shear bolts at Post #5 and no 10-inch post bolt, but with shear bolts and a 10-inch post bolt at Post #7] the order in which the sets of shear bolts fail is controlled so the 1st set fails before the 2nd set.”

“The present invention . . . has now overcome this problem and allows a greater amount of controlled telescoping to occur . . .”

61 Defendants used a 10-inch bolt at Post 7 in their 2010 Crash tests, as shown in the third photo below, but Defendants omitted this bolt in their drawing supplied to the FHWA (see Figure 3, above), and then failed to supply a 10-inch bolt or to apprise states or contractors that a 10-inch bolt is needed at Post 7. See photo from Defendants’ installation manual below (middle photo).

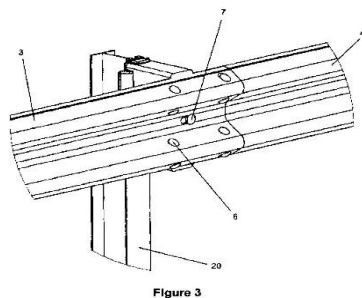


Figure 3
Patent Drawing of Post 7 Bolts



Shear Bolts at Rail 3 and 4 Connection
Post 7 in Installation Manual



Crash-tested Post 7

62 Defendants provided state DOTs and X-Lite installers with installation manuals and drawings that required **no post bolt** for the tangent X-Lite at Post 7, despite the fact that Defendants' crash tests were conducted with a bolt at Post 7, and despite the fact that Lindsay's own patent states that X-Lites without this post bolt are dangerous:

"In some instances [without the 10-inch bolt at Post 7] the 1st and 2nd set [of shear bolts] could fail simultaneously, or the 2nd set could fail before the first set, typically both mis-events being triggered as the impact head on the downstream end of the first rail . . . impacted with the upstream end of the second rail . . ."

X-Lite Patent.

63 Defendants have never disclosed to the FHWA (a) that the tangent X-Lite for which they obtained approval in 2011, is materially different due to the bolt configuration than the actual tangent X-Lite that was crash tested, (b) that the tangent X-Lite needs a 10-inch Post bolt at Post 7 in order to operate safely, as confirmed by their patent, and (c) that Defendants never crash tested the bolt configuration (with no 10-inch post bolt at Post 7) on the X-Lite that Defendants sought to have approved in 2011.

C. LENGTH OF THE SYSTEM

64 There are several issues pertaining to the length of the X-Lite system. **First**, the FHWA expressly accepted the X-Lite in 2011 as a 37.5-foot system. This acceptance came despite the fact that the tangent 3-31 crash test demonstrated that the system needs at

least 62 feet to safely stop a pickup truck. This was not highlighted in the crash test reports.

65 **Second**, the installation manuals for the X-Lite system, beginning in 2011, instruct that the system should be attached to “existing guardrail” without specifying the minimum length needed for the “existing guardrail.” Lindsay also marketed the X-Lite as a 37.5-foot system that could be attached directly to a concrete barrier, without ever disclosing to states that the X-Lite needed at least 62-feet to bring a pickup truck to a controlled stop.

FREQUENTLY ASKED QUESTIONS

What makes the X-LITE Terminal different from the other redirective, gating terminals on the market?

The X-LITE Terminal utilizes a telescoping, non-extruding design to provide safe and consistent performance. The X-LITE Terminal is also engineered with maximum interchangeability between flared and tangent roadside applications. Lastly, The X-LITE Terminal is engineered using simple design and standard guardrail components that can be procured in kit or system form.

Can the X-LITE Terminal be attached to concrete barrier?

Yes, The X-LITE Terminal can be attached to concrete barrier with the addition of standard transitions.

66 **Third**, in or about 2014 Defendants began to market a 50-foot X-Lite system without ever seeking approval for the longer system from the FHWA. The longer system has features, including the modified slider panel and a 10-inch bolt at Post 7, that were never disclosed to the FHWA or to the state Departments of Transportation and never approved when Defendants’ sought funding eligibility for the X-Lite.

VII. DEFENDANTS FALSE CLAIMS TO THE STATES

67 Yet, even after making these secret changes, Defendants continued to sell the X-Lite for use on the NHS and state highways, and to falsely certify to states and

contractors that the X-Lite Defendants were selling was the exact same X-Lite that had been approved by the FHWA.

68 This was in violation of the terms of Defendants' September 2011 FHWA Eligibility letter, which specifically required that Defendants "certify to potential users that the hardware furnished has essentially the same chemistry, mechanical properties, and geometry as that submitted for acceptance, and that it will meet the crashworthiness requirements of the FHWA and the NCHRP Report 350."

69 On March 6, 2013, Defendants sought FHWA approval for a change that consisted of the addition of an aluminum clip to the cable attachment at post number 2 of the X-Lite system. To prove this change would have either no change or a positive change on the performance of the X-Lite Defendants ran a bogie test on Post 2 with the aluminum clip.

70 In their March 6, 2013 letter to the FHWA, Defendants again fraudulently omitted any reference to the fact that the original drawings submitted to the FHWA of the X-Lite system were not an accurate portrayal of the system that was crash tested in 2010. Nor did Defendants notify the FHWA of the undisclosed changes they had made to the system since its approval in 2011.

71 The March 29, 2013 eligibility letter (cc120a) from the FHWA required that "Any changes that may influence system conformance with MASH⁵ will require a new reimbursement eligibility letter."

72 The March 29, 2013 letter also required that Defendants "certify to potential users that the hardware furnished has the same chemistry, mechanical properties, and

⁵ THE FHWA most likely meant to require compliance under NCHRP Report 350 rather than MASH since the X-Lite was originally tested under NCHRP Report 350.

geometry as that submitted for review, and that it will meet the test and evaluation criteria of the MASH.”

73 In a July 16, 2013 letter, Defendants again sought approval for a change to the X-Lite system, this time to the soil plate. In that letter, Defendants again failed to disclose the other changes made to the X-Lite system, or to seek approval for those changes.

74 Once again, the FHWA reminded Defendants that “Any changes that may influence system conformance with MASH⁶ will require a new reimbursement eligibility letter.”

75 The January 28, 2014 eligibility letter from the FHWA also required that Defendants “certify to potential users that the hardware furnished has the same chemistry, mechanical properties, and geometry as that submitted for review, and that it will meet the test and evaluation criteria of the MASH.”

VIII. DEFENDANTS’ FRAUDULENT CRASH TESTING.⁷

76 The purpose of Defendants’ misrepresentations about their crash testing of the X-Lite and about the quality and character of the X-Lite that was crash tested, was to establish a false and inaccurate record that would enable Defendants to sell deficient X-Lites to unsuspecting State DOTs.

77 Defendant Safe Technologies, Inc., which is a wholly owned subsidiary of Defendant Lindsay Corporation and Barrier Systems, performed all of the crash testing on the X-Lite end terminal.

⁶ THE FHWA most likely meant to require compliance under NCHRP Report 350 rather than MASH since the X-Lite was originally tested under NCHRP Report 350.

⁷ See also Exhibit C hereto.

78 At the time Defendants performed the crash testing, the FHWA did not require either third party certification or independent verification of crash testing.

79 Safe Technologies manager, Jacob Ruskofsky, who supervised the crash testing of the X-Lite and signed the crash test reports, was at the time the X-Lite was tested simultaneously acting as the design and applications engineer for Barrier Systems in charge of research and development projects. Mr. Ruskofsky was also in charge of assuring on behalf of Barrier Systems, that “necessary guidelines for certification were met during crash testing.”⁸

80 The crash tests submitted for acceptance by the FHWA of the X-Lite were conducted between September and December of 2010, and the crash test reports and results sent to the FHWA were dated December 20, 2011 and received by the FHWA on December 27, 2010. The timing is significant because the FHWA announced in 2009 that any first-time submissions of highway safety devices after January 1, 2011 were to be tested and reviewed under the much more rigid MASH standards.

81 This is also significant because the deadline for NCHRP Report 350 testing as of the end of 2010 increased the pressure on Lindsay and Safe Technologies to submit the X-Lite crash testing prior to the January 1 deadline, leaving little or no time to repeat crash tests for any design changes that may have been recommended by their engineers based upon the results of the crash tests.

A. Defendants’ representations in the crash test reports about the outcome of the crash tests, in some cases directly contradict the results shown in the actual crash test videos.

⁸ Linked-In Job Description of Jacob Ruskofsky. <https://www.linkedin.com/in/jacob-ruskofsky-p-e-4a5112a2/> (last visited January 20, 2018).

82 In the report for tangent crash test 3-30 (the small car), for instance,

Defendants falsely contend that:

[T]he vehicle bumper came to bear against the impact head which caused the article to start telescoping. The system continued to telescope⁹ until the first three guardrail panels nested which sheared the shear bolts at post # 7 allowing the three guardrail panels to release and fall to the ground on the front side of the system. This action allowed the vehicle to travel to the back side of the system and come into contact with several guardrail posts which caused the vehicle to yaw out.

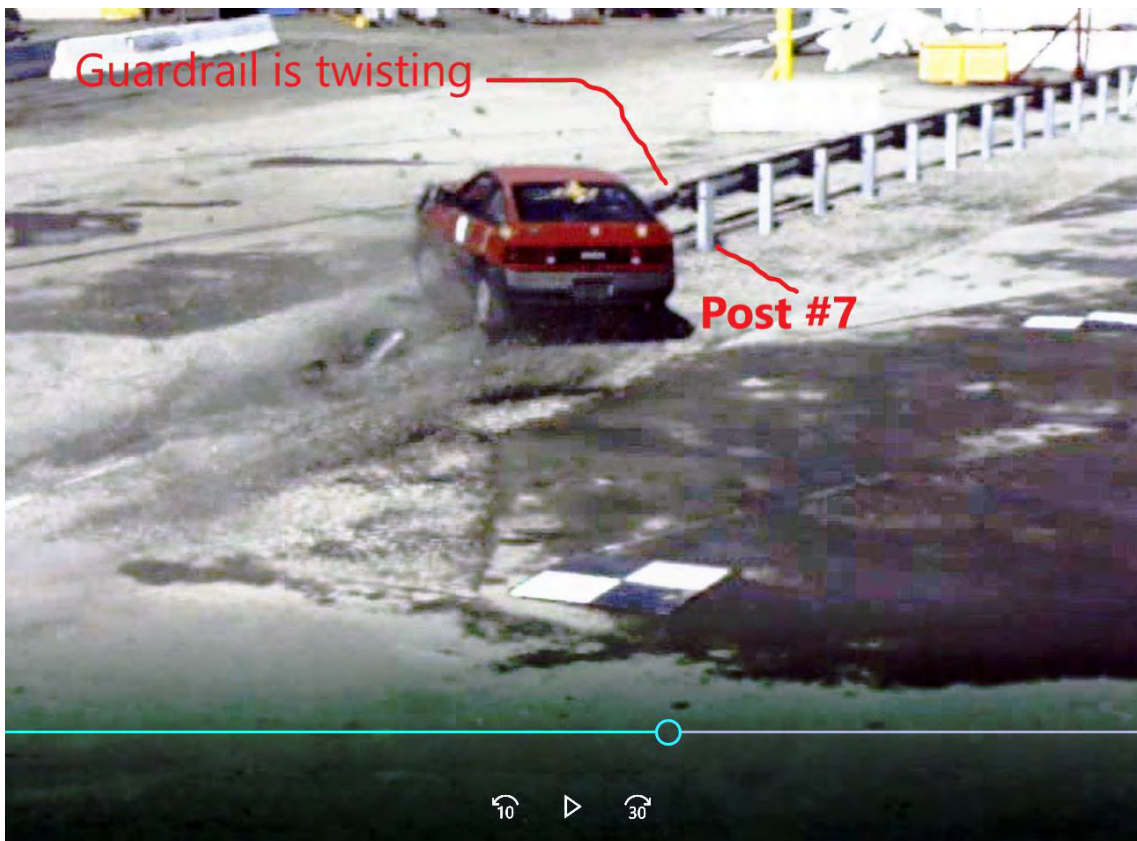
The first three guardrail panels did not telescope and nest, nor did they shear the shear bolts at post #7. Instead the head and the guardrail panels detached when the car rode up on the guardrail between post 6 and post 7.



⁹ The report does not define “telescoping”, but it is defined in the dictionary as “to slide or cause to slide into itself, so that it becomes smaller.”



Figure 4 This photo shows that any telescoping or nesting stopped before Post 5 and that the shear bolts at Post 5 never sheared.



B. Shear Bolts at Post 9 in the 3-31 Tangent Crash Test.

83 There are other indications that different bolts were used than disclosed in the crash test report and that guardrail was moved or rearranged after certain crash tests.

84 Defendants claimed to use only two sets of shear bolts in test 3-31, at Posts 5 & 7, but comparing test 3-31 to 3-30 (where shear bolts were used at Posts 5, 7, & 9), it appears 3-31 also used shear bolts at Post 9.

85 Post 9 in the 3-30 test is shown below with shear bolts.



Similarly the bolts at Post 9 in the 3-31 crash test, below, appear to be identical to the yellow bolts used in the 3-30 crash test.



THE FOLLOWING PHOTO IS ALSO FROM THE TANGENT 3-31

INSTALLATION



BUT COMPARE WITH THE BOLTS ON THE FLARED POST #9 IN THE 3-31 CRASH TEST BELOW (WHERE THERE WERE NO SHEAR BOLTS):



86 Furthermore sheared yellow bolts were photographed next to Post 9 after the 3-31 crash test.

THE TRUCK STOPPED JUST BEFORE POST 10 (below).

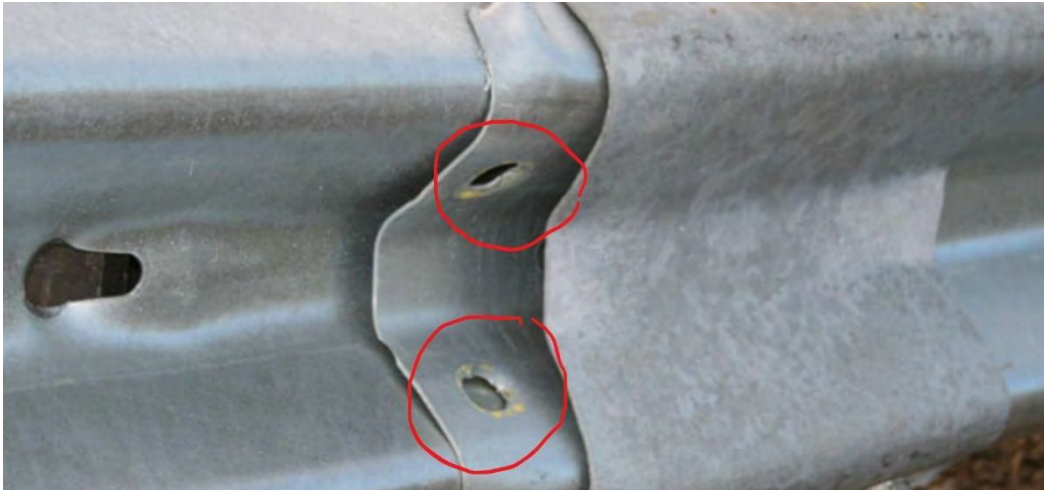


YELLOW SHEAR BOLTS WERE PHOTOGRAPHED JUST UNDER THE TRUCK NEXT TO POST #9 AFTER THE TRUCK CAME TO A STOP (SEE BELOW)



- C. There is also evidence that undisclosed shear bolts were used at Post 3 in the 3-31 crash test under the Slider Bracket.

In the 3-31 crash test, the slider bracket stopped at Post #12 – along with Guardrail Panel #1. See Yellow paint in bolt holes, indicating yellow shear bolts were used.



Further evidence that these shear bolts were secretly attached under the slider panel, is that the guardrail panel is marked “Panel 1”, which is the guardrail panel that was attached to the slider panel.





D. Unexplained variations in photos of the bolt in the guardrail panel resting at Post 11 after the 3-31 Crash Test, raises questions about the integrity of the post-crash photographs.

87 There is also evidence that guardrail panels were moved or rearranged after the 3-31 crash testing.

88 For instance, photographs of the guardrail that was at Post 11 in the 3-31 crash test (and was probably originally attached to Post 10) indicate the guardrail was rearranged after the test.

89 As shown below, the bolt inexplicably changes location between photos. In some photos the bolt in the guardrail is on the right side of the opening, while in others it is on the left. In most photos there is an opening to one side or the other of the bolt, but in one photo there is no opening next to the bolt.

For instance, below the bolt is on the right side of the opening.



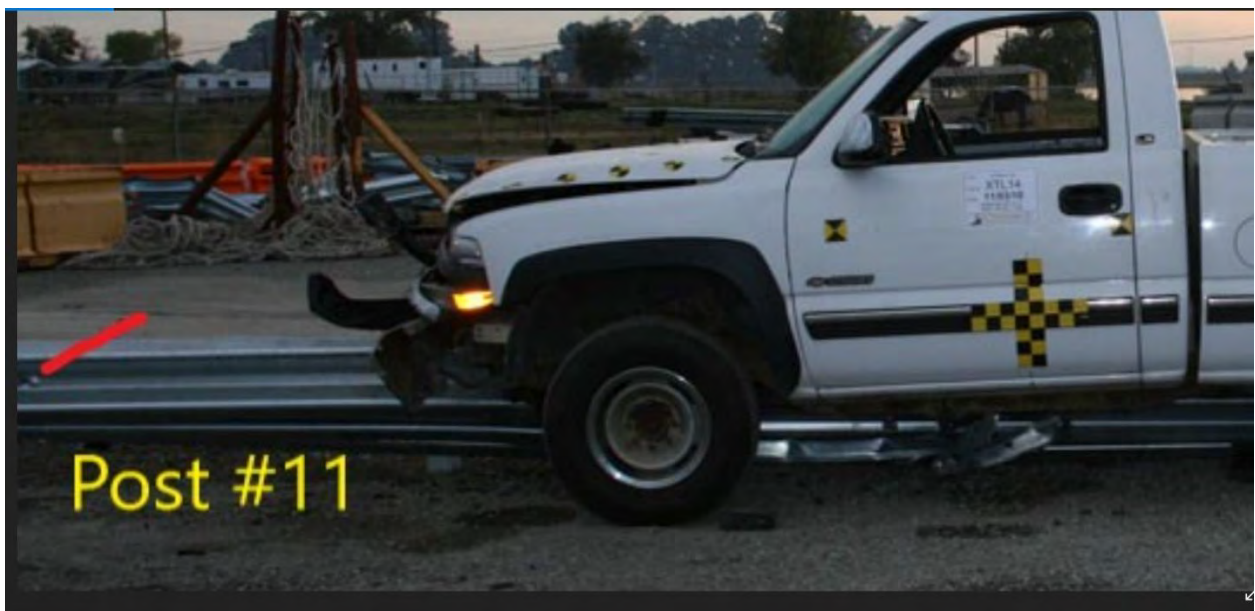
The bolt below is on the left and metal is obscuring the opening.



While below, the bolt is on the left and there is no metal obscuring the opening.



The bolt below is on the right side of the opening.



IX. DEFENDANTS KNOWINGLY MADE FALSE STATEMENTS.

90 Defendants knowingly and deliberately deceived State DOTs with their false statements as detailed above concerning the characteristics, crash testing and configuration of the X-Lite end terminal in order to induce State DOTs to use the X-Lite on state and federally

funded highway projects, including the National Highway System. Defendants' false statements were also designed to fraudulently lead State DOTs to conclude that the X-Lite met NCHRP Report 350 crash test criteria, when Defendants knew that the X-Lite they were selling to State DOTs did not meet these standards. Moreover, Defendants knew when they changed the X-Lite that they were required to report those changes to state Departments of Transportation, but Defendants failed to make any such disclosures.

91 Furthermore, all state Departments of Transportation ("DOTs") maintain Qualified Products Lists ("QPLs") or Approved Products Lists ("APLs") or the equivalent for products that have been tested and approved for use in highway and road construction in compliance with federal and state regulations.

92 In order for a guardrail end terminal to be placed on a state's QPL or APL (or its equivalent), manufacturers must expressly certify to the State DOTs that the end terminal it is selling meets the standards of NCHRP Report 350.

93 When supplying the product to State DOTs for use on federal or state highways, manufacturers must expressly certify to contractors and state Departments of Transportation that the product is compliant with NCHRP Report 350. A sample certification for the X-Lite is attached hereto as **Exhibit C**.

94 Defendants made false statements to State DOTs, certifying (a) that the X-Lite end terminal Defendants were selling had been properly crash tested under NCHRP Report 350 and (b) that the X-Lite Defendants' were selling was the same X-Lite disclosed to the FHWA in order to obtain a federal-highway-aid eligibility letter for the X-Lite. These statements were false and Defendants were aware they were false at the time they made these statements.

95 Each time that Defendants provided the X-Lite end terminal for use on a state or federal project on the Interstate Highway System, Defendants also violated 18 U.S.C. 1020, by

knowingly making “false statement[s], false representation[s], or false report[s] as to the character [and] quality” of the X-Lite since they were falsely representing the X-Lite as, among other things, that (a) the same terminal that had been found eligible under FHWA eligibility letter cc120, (b) the X-Lite terminal was NCHRP Report 350 compliant, when Defendants were aware that the secretly changed X-Lite terminal they were selling had never been tested under NCHRP Report 350, and (c) the X-Lite terminal was safe for use on the highways, when their own patent demonstrated that the X-Lite terminal was unsafe without a 10-inch bolt at Post #7 and Defendants sold the X-Lite without requiring or explaining to users that the X-Lite required such a bolt.

X. DEFENDANTS FRAUDULENTLY INDUCED STATE DOTs TO PURCHASE X-LITE END TERMINALS.

96 By falsely holding out the X-Lite Lindsay manufactured and sold as the same X-Lite that was crash tested under NCHRP Report 350, Defendants fraudulently induced State DOTs to add the X-Lite to State QPLs and/or APLs and fraudulently induced state DOTs to allow the X-Lite to be used in federal and state highway projects pursuant to state highway contracts.

97 Once the X-Lite was added to states’ QPL or APL, Lindsay was required to notify states of any modifications made to the X-Lite as a condition of remaining on the QPL or APL. Most states also require annual certifications from manufacturers warranting that no modifications had been made to the end terminal. Lindsay made more than 100 changes to the X-Lite between 2011 and 2019 yet Lindsay alerted state DOTs to only two (2) of those changes and actively hid the other changes from state DOTs.

98 Lindsay did not disclose any information about more than 100 changes to the X-Lite to avoid scrutiny, evade crash-testing requirements, cover up its fraud and in order to continue selling thousands of X-Lites into the states.

99 Lindsay's silence concerning the glut of changes made to the X-Lite between 2011 and 2019 was relied on by State DOTs who were induced by Lindsay's material omissions to leave the X-Lite on state APL and QPL lists and to purchase thousands of X-Lite end terminals.

100 Defendants' fraud caused thousands of false claims to be submitted for payment, resulting in millions of dollars in federal and state funds paid out to Defendants and to contractors for installation of the X-Lite.

XI. DEFENDANTS CONSPIRED TO SUBMIT FALSE CLAIMS FOR STATE AND FEDERAL HIGHWAY MONEY FOR THE X-LITE.

101 Lindsay Corporation, Lindsay Transportation Solutions, Barrier Systems, and Safe Technologies Inc. (the "Lindsay Defendants" or "Lindsay") along with Armorflex Corp. and Dallas James (the "Armorflex Defendants" or "Armorflex") agreed to work together and to take the necessary steps to obtain State DOT approval in order for the Lindsay Defendants to make false claims to State DOTs for state and federal highway funds. The Lindsay Defendants had a profit motive while the Armorflex Defendants stood to gain by collecting a licensing fee for every X-Lite sold.

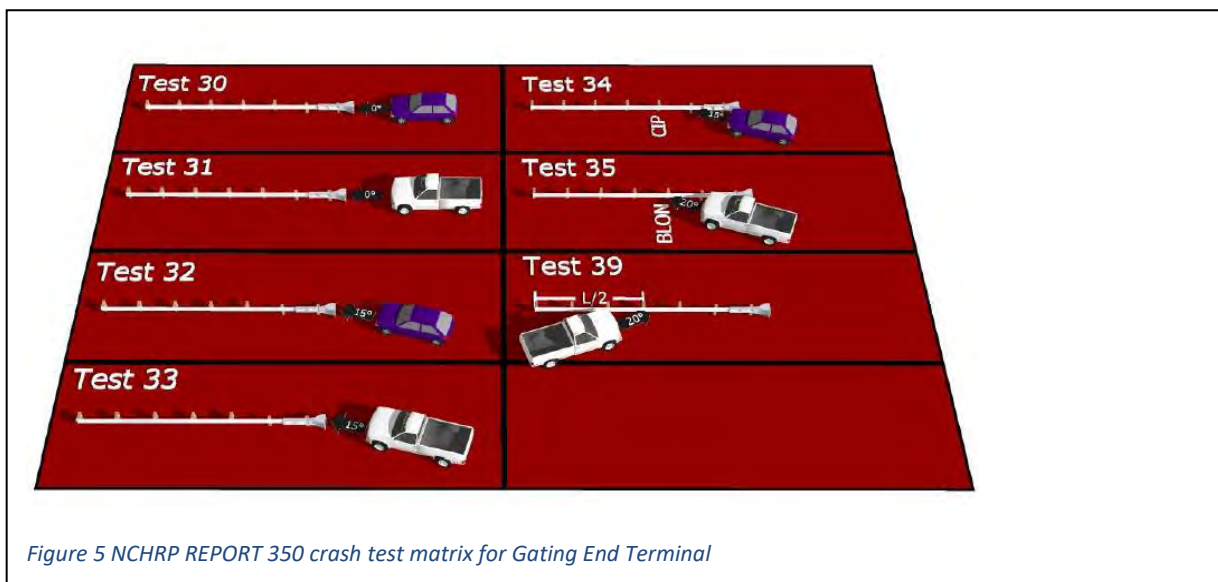
102 Lindsay and Armorflex decided that it was necessary to obtain an Eligibility Letter for the X-Lite from the FHWA to make it easier to be placed on state DOTs' Qualified Product Lists ("QPLs") so the X-Lite could be used on DOT road projects.

103 And for the plan to work, the X-Lite needed to be as cheap as possible.

104 Lindsay and Armorflex had previously entered into a partnership to develop, market and sell a different end terminal, called the X-Tension, but that end terminal sold poorly in the United States due to its relatively high price and complicated installation as compared to competitive products. While the X-Tension cost nearly \$2,000 a unit, Lindsay and Armorflex wanted to keep their cost to DOTs for the X-Lite at around half the cost of an X-Tension, or \$1,000.

105 Though they marketed the X-Lite as a cheaper and more installer-friendly version of the X-Tension, both Armorflex and Lindsay knew that the X-Lite was in fact very different from the X-Tension, which was much heavier and has an anchoring system that has twice the anchoring support of the X-Lite. The X-Tension is also a non-gating end terminal, while the X-Lite is designed as a gating system.

A. LINDSAY AND ARMORFLEX DESTROYED ALL NOTES AND COMMUNICATIONS ABOUT THE X-LITE CRASH TESTING TO CONCEAL THEIR FRAUD.



106 Armorflex and Lindsay ran a series of crash tests at Lindsay's crash testing lab in California – Safe Technologies Inc. – over four months, from approximately August 2010

through November 2010. The co-conspirators had to rush because they were on a tight timeline to complete the crash testing before January 1, 2011 when a new, tougher crash testing standard¹⁰ went into effect. Lindsay and Armorflex agreed it would be difficult to pass crash testing under the old standard -- NCHRP Report 350 – and that the X-Lite would never pass MASH tests.

107 They made the deadline with only a day or so to spare and submitted the crash test package to the FHWA on or about December 30, 2010.

108 During crash testing Lindsay and Armorflex made numerous changes to the X-Lite before and after virtually every test that was run (See Attachment ____ hereto) but Lindsay and Armorflex destroyed all contemporaneous notes and communications about the crash testing and preserved not a single document evidencing any engineering analysis performed to justify any of the modifications.

109 There is no question, however, that Lindsay and Armorflex knew the X-Lite was not actually crashworthy. Out of 19 total crash tests run between 2010 and 2016 under either NCHRP Report 350 or a modified versions of NCHRP Report 350 crash tests (the VDOT crash testing), at least 14 crash tests failed.



Figure 7 The car after crash test XTL 5



Figure 6 Crash Test XTL 6

¹⁰ The new standard is called MASH which stands for “Manual for Assessing Safety Hardware.”



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Figure 9 XTL 7 crash test tore off the roof of the car.



Figure 8 Crash test XTL 11 also demonstrated a risk of spearing.

110 Even when Lindsay and Armorflex beefed up the X-Lite in ways designed to give the X-Lite its best chance at passing certain crash tests, in many cases the X-Lite continued to fail. And more than once Lindsay and Armorflex deemed questionable crash tests a PASS despite evidence to the contrary.

111 For instance, even with shear bolts added at Post 9 the truck in the XTL 13 (3-31) crash test traveled 75 feet and overrode the system and was only stopped by the guardrail that collected under the truck. Lindsay and Armorflex agreed they would call the test either



Figure 10 XTL 13 CRASH TEST

“inconclusive” or a “pass” due to equipment failure even though the test demonstrated that the X-Lite is not able to slow a vehicle to a safe speed within the length of the system.

112 XTL14 (also a 3-31 crash test) was run a day later and had the same result – it overrode the system and was stopped by the accumulated guardrail under the truck at Post 10, or about 57 feet into the system. This time Lindsay and Armorflex agreed that it was a “PASS” even though NCHRP Report 350 directs the “vehicle should not penetrate, underide or **override** the installation. Gerrit Dyke has since admitted that there were shear bolts at Post 9 from XTL 11 through XTL 14, but claims the bolts were not activated in XTL 14 (because the guardrail jammed up under the truck stopped it). Lindsay and Armorflex decided not to include either a Post 9 or shear bolts for Post 9 on X-Lite systems sold to state DOTs despite the fact that all of



Figure 11 XTL 14 CRASH TEST

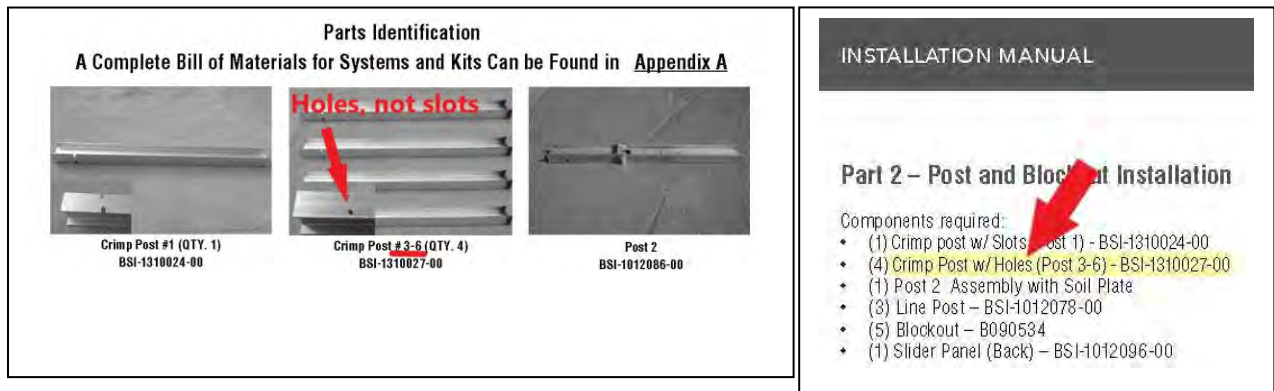
Lindsay’s crash tests demonstrated the X-Lite cannot stop a vehicle within less than 57 feet.

B. LINDSAY AND ARMORFLEX AGREE TO KEEP QUIET ABOUT CERTAIN MODIFICATIONS TO THE SYSTEM TO KEEP PRICING DOWN.

113 In addition to modifications made during crash testing, decisions were made by Lindsay and Armorflex after the crash testing was complete about the design of the X-Lite that

the FHWA seeking an Eligibility Letter for the X-Lite never mentioned that the 3-35 crash test had failed with shear bolts. Armorflex did, however, disclose that **shear bolts were added** to the system at Post 5 before the Flared X-Lite 3-30 crash test. Armorflex said “longitudinal capacity not compromised” by the placement of shear bolts at Post 5, meaning that there was no reason to re-run Test 3-35 with shear bolts, knowing that was likely false because all of the 3-35 crash tests failed with shear bolts. But Armorflex and Lindsay agreed to keep that fact a secret from the FHWA and State DOTs, and they did.

118 Armorflex also told the FHWA that between the fourth crash test (3-35 on the flared system) and the ninth crash test (3-30 on the flared system) that a **post hole bolt at post 3 was changed so it was slotted horizontally**. But in another cost-cutting move, Armorflex and Lindsay after receiving the Eligibility Letter in 2011 changed that slot back to a regular Post Hole when they sold the X-Lite flared system onto United States highways.



C. LINDSAY AND ARMORFLEX SELL THOUSANDS OF X-LITES ONTO THE ROADWAYS.

119 After receiving the X-Lite Eligibility Letter from the FHWA, Lindsay proceeded to present the same fraudulent data to multiple State DOTs until ultimately approximately two dozen states purchased more than 30,000 X-Lites.

120 As requested, Lindsay had received an Eligibility Letter for a 37.5-foot system, despite the fact that it took more than 57 feet to stop the truck in the tangent 3-31 crash test. Most of the systems sold by Lindsay were 37.5-foot tangent systems, followed by sales of the flared system.

121 Lindsay also continued to make changes to the X-Lite -- more than 100 additional modifications, only two of which were ever reported to State DOTs (a new soil plate and a cable bracket). The changes encompassed nearly every component part, the chemical properties and materials used to manufacture the component parts, along with material changes to the shear bolts, post bolts, nuts, washers, length of the system, changes to slots, holes and crimps on the posts. See Attachment ____.

122 The changes were made so often and so quickly that the installation manuals could not keep up.

123 In general, however, everything seemed to be going as planned by Armorflex and Lindsay until 2013 when Lindsay learned that one of its largest competitors, Trinity Industries, was facing a false claims act case for making undisclosed changes to its ET-Plus end terminal. At that point, Lindsay began to assess its own potential liability and to take steps to cover up its fraud.

D. LINDSAY FALSIFIES DOCUMENTS AND SENDS CREWS OUT TO ALTER EXISTING X-LITE INSTALLATIONS ON THE ROADS TO COVER UP ITS FRAUD.

124 After it became alert to its potential liability, Lindsay began to create falsified documents to obscure its fraud and to provide a smokescreen in case of an investigation. It retroactively papered its own files with misleading and inaccurate records planted there to give the false impression that Lindsay had diligently followed state and federal rules and had always used good engineering and manufacturing practices, when none of that was true.

125 A few modifications to the X-Lite received particular attention. Lindsay became concerned about its failure to specify a post bolt in Post 7 and it so created a 50-foot system (12.5 feet longer than the original X-Lite system) and “updated” its installation manuals to instruct installers to place a bolt in Post 7.

126 Lindsay also sent crews out into the field to physically alter X-Lite installations by placing a bolt in Post 7 in X-Lites installed on the roadways in certain states, including Tennessee. This was not a matter of simply placing a bolt in the post; it required cutting and drilling apart the existing installation before a post bolt could be installed. And crews were specifically instructed not to inform the states of this activity.

127 Lindsay also attempted to cover up its change to Post 3 of the flared X-Lite, which was supposed to be connected to the slider panel with a slot on Post 3. Instead Lindsay had been making the flared X-Lite with holes instead of slots.

128 Lindsay’s road crews made templates then dismantled existing flared installations and sawed into the posts to change the holes to slots. In most cases, Lindsay kept this secret from State DOTs and instructed its crews to do the same.

129 Where Lindsay did notify certain states about the need to change Post 3, it misrepresented to State DOTs that the problem stemmed from shipping errors or from an inadvertent mistake in the installation manual. In fact, Lindsay had made the change deliberately as a cost-cutting measure.

130 Lindsay also began frantically amending, adding to and printing up new versions of its installation manuals. The new manuals included changes to critical component parts and modifications to drawings and instructions, but not one of the manuals highlighted the changes to users or explained the reason(s) for the update(s).

131 State DOTs and installers had no way of knowing there were new manuals with updated and new instructions because Lindsay never told them. It simply began handing out the new manuals with new X-Lite purchases.

132 In keeping with its original plan with Armorflex, Lindsay never told State DOTs the truth about any of the changes, nor did it alert them that Lindsay had kept silent while thousands of X-Lites were installed in configurations that created safety hazards.

133 For instance, while Lindsay knew very well that the X-Lite will not function correctly without a post bolt in Post 7, Lindsay never told State DOTs that Lindsay had knowingly allowed thousands of X-Lites to be installed without a post bolt.

E. LINDSAY’S COVER UP SHIFTS TO BLAMING STATE DOTs.

134 Soon after it made multiple “updates” to its installation manuals, Lindsay also began conducting “installation audits” in states with X-Lites on the roadways.

135 Lindsay portrayed itself in these audits as a concerned manufacturer with “safety as its first priority” but Lindsay had a less charitable motive. Lindsay sought to shift its liability for its undisclosed modifications to contractors and – most especially – to State DOTs.

136 The installation audits were a smokescreen that Lindsay used as a sword and a shield against State DOTs. Brandishing its latest – heavily revised – installation manual, Lindsay claimed State DOTs and installers were negligently installing X-Lite terminals, when in fact the key issues Lindsay highlighted had just been added to the latest installation manuals and X-Lite drawings.

137 These issues included (1) the post bolt in Post 7, (2) a one-inch washer connecting the slider panel, (3) 60-pounds of torque on the cable, and (4) proper lapping of the w-beam for the X-Lite.

138 In other words, instead of owning up to the fact that Lindsay had omitted a Post Bolt in Post 7 in all of its drawings and installation manuals for the X-Lite, for instance, Lindsay waved around the latest version of its installation manual and blamed State DOTs – and their installers – for failing to place a Post Bolt at Post 7 (among other things).

<p style="text-align: center;">Notes</p> <ul style="list-style-type: none"> □ Franklin Rd. between mile marker 75/76 <ul style="list-style-type: none"> □ Post 7 not bolted □ Just past Old Hickory exit just past mile marker 76 <ul style="list-style-type: none"> □ Head lapped wrong □ Post 1 washer and bolt on wrong side of post □ Cable is loose □ Old Hickory Exit 74 B <ul style="list-style-type: none"> □ Head lapped wrong □ Cable Loose □ No washer at slider bracket □ Post 7 not bolted correctly 	<p>From a presentation by Lindsay to the Tennessee DOT about an “installation audit” in 2016. Lindsay failed to tell TDOT that previous versions of the installation manual and Lindsay’s drawings showed no post bolt on Post 7, contained no torque instructions for the cable, no washer for the slider bracket and no lapping instructions.</p>
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139 Lindsay’s misrepresentations along with its installation “audits” were designed to cover up its fraud and to shift the focus from Lindsay to State DOTs who Lindsay scolded and blamed for failing to properly inspect X-Lite installations. In fact, the “improper” installations were simply done using previous versions of Lindsay’s own manuals.

140 In the same spirit, Lindsay made a sham filing with the FHWA in 2015 about a supposed modification to make the front of the slider panel from one piece of steel instead of two pieces of steel welded together. **Exhibit J.** Of course, the slider panel as tested by Lindsay in 2010 was one piece of metal and Lindsay had no intention of reverting back to that design. Nor would Lindsay have needed an Eligibility Letter from the FHWA to do so – since that’s the way the original X-Lite was crash tested in 2010 (with the front of the slider panel made from one piece of metal).

141 As outlined in Section XI supra, Lindsay made the modification to the front of the slider panel – welding it from two pieces and eliminating the bend it was tested with – in 2013 (**Exhibit B**) without ever seeking an eligibility letter from the FHWA and without ever notifying State DOTs about the change.

142 Lindsay's sham filing in 2015 with the FHWA never resulted in an eligibility letter, but of course that was OK with Lindsay since it made the request simply to establish a false record with the FHWA about the design of the slider panel. This was just another part of Lindsay's multi-faceted and multi-year project to cover up its fraud.

F. LINDSAY COVERS UP THREE FAILED CRASH TESTS BETWEEN 2015 AND 2016.

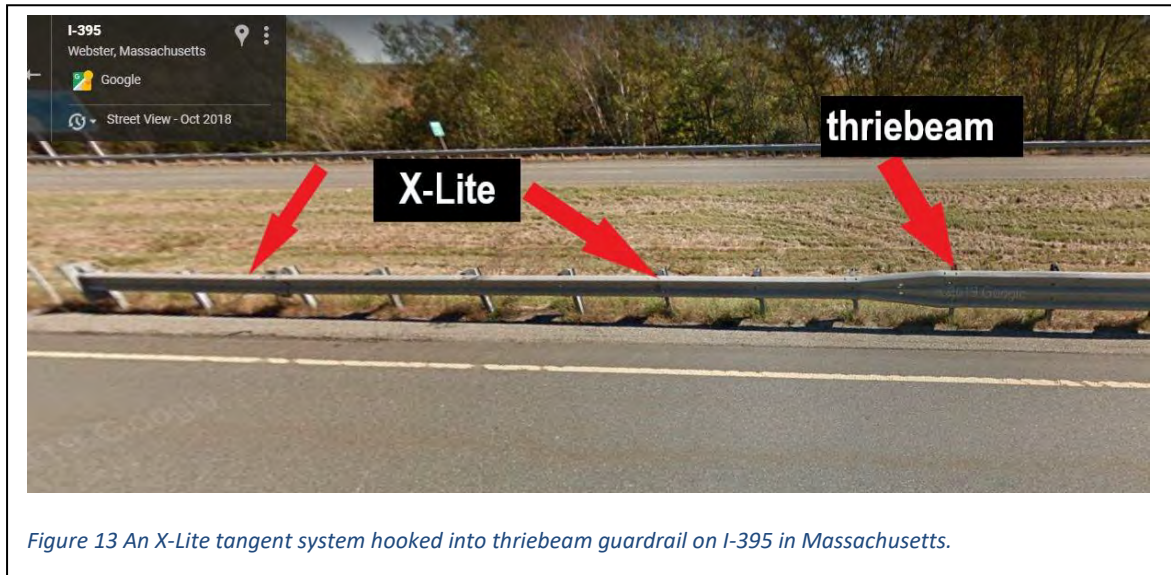
143 The failure of three crash tests run between 2015 and 2016 at Lindsay's crash testing facility demonstrated to Lindsay that the changes it made to the X-Lite had substantially worsened the performance of the X-Lite. Lindsay's response was to hide the crash tests.



Figure 12 Sharon, Mass. X-Lite crash in April 2015

144 The first crash test was run in June 2015 with a pickup truck and an X-Lite attached to thriebeam guardrail. It was run just two months after an impacted X-Lite in Sharon, Massachusetts pierced through three vehicles, causing serious injuries. That X-Lite was connected to thriebeam guardrail, just like a lot of existing installations in Massachusetts.

145 Lindsay's June 2015 crash test failed when the truck overrode the thriebeam and kept going until it had to be stopped mechanically. It was clearly a failure, but Lindsay called it a "Pass/Fail". Before the crash test Lindsay had been advising State DOTs that they could directly hook into concrete barriers and rigid barriers (like thriebeam) "with approved transitions" and many State DOTs did just that.



146 After the crash test – and without ever disclosing the test -- Lindsay began to change its guidance and told installers and State DOTs to place two guardrail lengths (25-feet) between 7th Post of the X-Lite and the thriebeam, but Lindsay never went back to states like Massachusetts to advise them that the previous guidance had been wrong. As a result, dozens of installations with less than 25-feet of guardrail between Post 7 and the thriebeam remain in Massachusetts, South Carolina and other states.

147 The second crash test, run in January 2016, was a low angle 3-30 crash test to replicate one of the crash tests planned on the X-Lite by Virginia DOT. Lindsay's crash test at Safe Technologies Inc. (its own testing facility) failed with g-forces well above the allowable limit. Yet, after VDOT's crash test of the X-Lite also failed nine months later, Lindsay claimed the failure was caused by VDOT's alleged use of the wrong type of soil for the test. Lindsay

knew at the time that its own crash test – presumably using the “correct” soil – had also failed, but it never revealed that crash test to State DOTs or the FHWA.


148 The third crash test was run in the summer of 2016 after three horrific, fatal spearing incidents with the X-Lite in Tennessee and Missouri. The Tennessee DOT in particular had requested additional information and answers from Lindsay about the performance of the X-Lite, which Lindsay failed to provide. See **Exhibit J**.

149 Lindsay also never disclosed that the crash test it ran to demonstrate the X-Lite was performing as intended, demonstrated just the opposite. Like the other secret crash tests, the third crash test failed with g-forces well in excess of the limits of NCHRP Report 350.

150 Lindsay covered up the failed crash tests by (1) actively hiding the existence of the crash tests and failing to disclose them to State DOTs or to the FHWA even when requested to provide additional information in 2016 and beyond, (2) lied about the crash test results and claimed they had passed under NCHRP Report 350 criteria, when they had unequivocally failed, and (3) attempted to obscure the results by soliciting a written opinion from a former Lindsay engineer to make it appear that an unknown equipment failure or an unseen force might have caused the crash test failure in the third test.

**G. LINDSAY FALSELY PORTRAYS THE X-LITE AS STABLE AND LESS
LIKELY TO SPEAR CARS BUT COVERED UP EVIDENCE TO THE
CONTRARY.**

151 The Lindsay Defendants made false claims in marketing the X-Lite to State DOTs by touting its stability and claiming that the X-Lite is “reduces vehicle spearing”. Both misrepresentations were made to induce State DOTs to purchase the X-Lite and State DOTs did purchase the X-Lite as a result, but the claims were false.



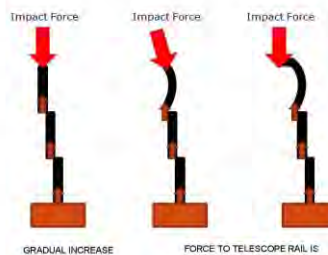
X-Lite System Stability

Design Function

- Rails free to slide out of vehicle path with little end on resistance
- Activation force and braking forces are low
- More rails telescoped = more braking force.
- W Beams telescope in end on impacts

Benefit / Solutions

- Not completely reliant on column strength of W Beams
- Reduced possibility of rail buckling
- Gating System, but not compression based
- Little or no debris field



PROBABILITY OF REDUCING RAIL IS LOWER AS THE EFFECTIVE COLUMN IS SHORTEN AND THE FORCE TO TELESCOPE THE RAIL IS LESS THAN THE BUCKLING FORCE.

15

X-LITE NCHRP 350 TL-3 END TERMINALS

3542 05/2014



"The non-extruding design also reduces vehicle spearing associated with older technology"

With a telescoping, non-extruding design, the X-LITE NCHRP 350 TL-3 End Terminals are engineered to allow maximum interchangeability for both flared and tangent roadside applications. The non-extruding design also reduces vehicle spearing associated with older technology. In addition, X-LITE End Terminals have been designed using many non-proprietary guardrail components, resulting in 34% fewer components than competitors. This saves freight, inventory, repair and maintenance costs.

Visit <http://www.barriersystemsinc.com/xlite-end-terminal> for more information.

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152 Lindsay covered up evidence that its claims were false, including by concealing that its expert and business partner, Marco Anghilieri, who had run finite element analyses (“FEA analyses”) on the X-Lite in 2013 to validate the soil plate modification that was disclosed to State DOTs, had informed Lindsay that “the general comment on the X-Lite is that,, since the

vehicles are not stopped in a controlled way by the system, the post impact trajectory could be unstable (as in the 900 kg test at 0 degrees¹¹).”

153 Most damning is that the FEA analysis using the models developed by Lindsay’s consultant and business partner, Marco Anghilieri, also confirmed the X-Lite’s propensity to spear vehicles, which was already known to Lindsay due to its 2010 crash tests. This propensity has to-date resulted in more than 30 deaths from such incidents around the country and dozens of amputations and other critical injuries.

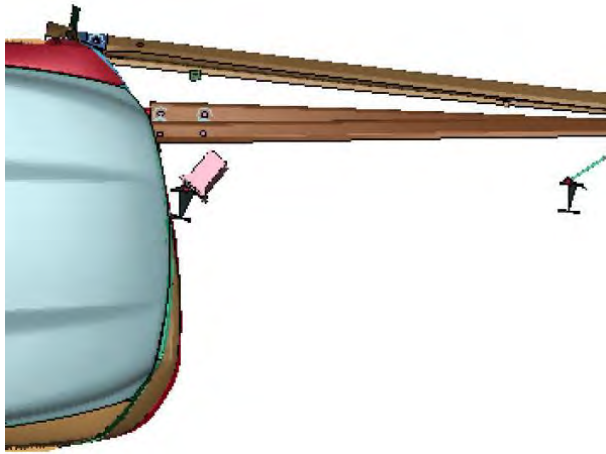


Figure 14 FEA Analysis confirmed inherent propensity to spear.

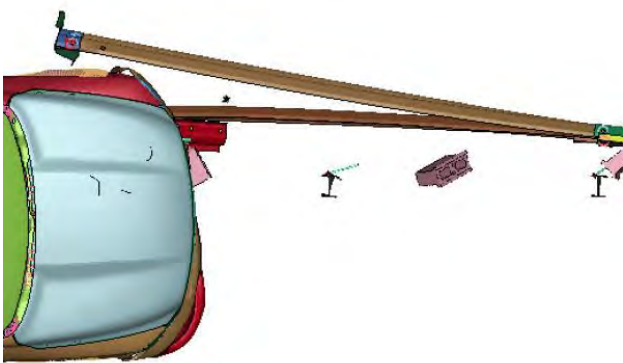


Figure 15 FEA Analysis confirmed the X-Lite's propensity to spear.

¹¹ The 3-30 crash test.

154 Lindsay nonetheless continued to make its false claims about “stability” and the lower likelihood of spearing while covering up and concealing from State DOTs all evidence to the contrary.

155 All of Defendants’ false statements and false claims were designed to – and successfully resulted in – State DOTs paying out millions of dollars for the X-Lite using state and federal highway funds.

XII. DEFENDANTS’ FALSE STATEMENTS AND OMISSIONS ARE MATERIAL.

59 Defendants were well aware that their false statements were material to decisions by state DOTs and the federal government to pay for the X-Lite end terminals.

60 The fact that Defendants went to great effort to conceal and cover up their fraud demonstrates the materiality of their fraud. Defendants were aware that State DOTs would not purchase the X-Lite if they were aware of Defendants’ fraud and of the Defendants’ many false statements made to induce State DOTs to purchase X-Lite end terminals.

61 State DOTs around the country stopped purchasing the X-Lite and removed the X-Lite end terminals from their roadways at great expense to taxpayers when State DOTs began to suspect that Defendants’ representations about the character and quality of the X-Lite were false.

62 The State of Missouri DOT initiated its own lawsuit to recover funds from Defendants after learning of Defendants’ fraud through discovery in a personal injury case.

Exhibit D.

63 Providing substandard, non-conforming goods and making false statements about the quality and character of highway transportation goods has not only resulted in non-payment by the government, but routinely results in lawsuits, criminal charges and other actions against

the fraudster by the United States and State DOTs seeking to recoup the fraudulently obtained funds paid out for substandard goods.¹²

- *United States v. J-M Mfg. Co., Inc.*, 2011 WL 13054147, at *1 (C.D. Cal. Dec. 7, 2011)(State DOTs and the U.S. brought an FCA lawsuit against defendant who provided non-conforming and substandard pipe for state and federal highway projects in violation of the terms of state highway contracts);
- *United States ex rel. Gervae v. Payne & Dolan, Inc.*, 2003 WL 23880355 (W.D. Mich. 2003)(complaint in intervention against suppliers who provided materials that did not meet the specifications of a Michigan DOT contract)
- Defendants falsified records of their compliance with contractual provisions in a highway contract with the Maryland State Highway Administration (MSHA). The relevant question in the federal FCA case was whether defendants' fraud was material to MSHA's decision to pay the claim. *United States ex rel. Hedley v. Abhe & Svoboda, Inc.*, 199 F. Supp. 3d 945, 955 (D. Md. 2016)
- *U.S. ex rel. Green v. Schuylkill Prod., Inc.*, 2014 WL 2154664, at *1 (M.D. Pa. May 22, 2014)(same, involving PennDOT contract);
- *United States ex rel. Maxfield v. Wasatch Constructors*, 2005 WL 8177200, at *2 (D. Utah Oct. 5, 2005)(recouping state and federal monies paid out for non-conforming goods);
- *United States ex rel. Popplewell v. Britton Bridge, LLC*, 2016 WL 3553033, at *2 (M.D. Tenn. June 30, 2016)(Federal FCA case based upon violation of contractual provisions in state DOT contract);
- *United States v. Parkins*, 2004 WL 3247164, at *1 (S.D.W. Va. July 1, 2004), aff'd, 120 F. App'x 507 (4th Cir. 2005)(same, based upon West Virginia DOT contract);
- *United States v. Kousisis*, 2019 WL 4126484, at *3 (E.D. Pa. June 17, 2019), aff'd sub nom. *United States v. Frangos*, 821 F. App'x 81 (3d Cir. 2020)(same, based upon PennDOT contract);
- <https://www.justice.gov/opa/pr/justice-department-recovers-over-22-billion-false-claims-act-cases-fiscal-year-2020> (department of justice prosecutions for fraud related to federal procurement)
- **Exhibit E**, DOJ Press Release: Sherman-Dixie Concrete Industries, Inc. To Pay \$664,000 To Settle False Claims Act Allegations concerning non-conforming goods;

¹² <https://www.fhwa.dot.gov/publications/publicroads/08jan/01.cfm>

- **Exhibit F**, 2020 Settlement Agreement between the Department of Justice and Dave O'Mara Contractor, Inc. and Padgett Trucking Inc. based upon the companies' violation of Indiana DOT contract specifications;
- **Exhibit G**, 2021 Announcing Department settlement with Minnesota DOT contractor who supplied substandard materials that did not meet contractual specifications.

XIII. DEFENDANTS CAUSED FALSE CLAIMS FOR PAYMENT TO BE MADE.

64 Defendants have caused thousands of false claims to be submitted for payment, resulting in millions of dollars in federal and state funds to be paid out to Defendants and to contractors for installation.

65 For instance, the attached **Exhibit H** contains a 2016 invoice #123201 to the state of North Carolina DOT for \$2,050.00 for the purchase a single X-Lite terminal.

66 **Exhibit H** also contains an invoice dated October 8, 2016 for three X-Lite terminal heads, at \$3,194 each to be used at an intersection with I-190 in Grand Island, New York.

67 **Exhibit H** contains invoices totaling more than \$600,000 for X-Lites to be installed on state and federal highways in Massachusetts.

68 **Exhibit I** is a letter from the Tennessee Department of Transportation to the FHWA, explaining that TDOT is removing more than 2,600 X-Lite terminals from its roads that were purchased in reliance upon the FHWA issued eligibility letter.

CLAIMS FOR RELIEF

COUNT 1

Federal False Claims Act: Presentation of False Claims **(31 U.S.C. § 3729(a)(1))**

96. Relator repeats and incorporates by reference the allegations contained in the preceding paragraphs of this Complaint as if fully set forth herein.

97. By virtue of the acts alleged herein, Defendants, through the acts of their officers, agents, employees, and sales representatives and for the purpose of defrauding the Government, knowingly presented and/or caused to be presented false or fraudulent claims for payment or approval under the Federal Highway Aid and other programs to officers, employees, or agents of the United States Government, in violation of 31 U.S.C. § 3729(a)(1).

98. As a result, federal monies were lost through payments made in connection with the claims and other costs and losses were sustained by the Government, and Defendants are liable for treble damages plus the maximum civil penalty of \$21,916 for each and every false and fraudulent claim made and caused to be made by Defendants and arising from their conduct as described herein.

COUNT II

Federal False Claims Act: Making or Using a False Record or Statement

99. Relator repeats and incorporates by reference the allegations contained in the preceding paragraphs of this Complaint as if fully set forth herein.

100. In furtherance of their scheme to present false claims and to conceal their violations, defendants knowingly made or used or caused to be made or used, false records or statements, including, *inter alia*, misrepresentations about the quality and character of the X-Lite end terminal and modifications to the X-Lite.

101. By reason of these false statements or records the United States has sustained damages in a substantial amount to be determined at trial and is entitled to recover treble damages plus a civil penalty as required by law for each violation.

COUNT III

Federal False Claims Act: False Statements (31 U.S.C. § 3729(a)(2))

102. Relator repeats and incorporates the preceding paragraphs of this Complaint as is fully set forth herein.

103. In performing the acts described above, Defendants, through the acts of their officers, agents, employees and sales representatives, knowingly made, used, or caused to be made or used, false records or statements to get a false or fraudulent claim paid or approved by the Government in violation of 31 U.S.C § 3729(a)(2).

104. The United States, unaware of the foregoing circumstances and conduct of Defendants, made full payments, and Defendants are liable for treble damages plus the maximum civil penalty of \$21,916 for each and every false and fraudulent claim made and caused to be made by Defendants and arising from their conduct as described herein.

COUNT IV

Federal False Claims Act: Conspiracy to Violate the False Claims Act (31 U.S.C. § 3729(a)(3))

105. Relator repeats and incorporates by reference the allegations contained in paragraphs 1 through 124 of this Complaint as if fully set forth herein.

106. By virtue of the acts alleged herein including the fraudulent crash testing, joint marketing, and fraudulent omissions regarding the changes made by Defendants, Defendants knowingly entered into a conspiracy to defraud the Government by getting a false or fraudulent claim allowed or paid, and agreed that the false records or statements would have a material effect on the Government's decision to pay the false or fraudulent claims in violation of 31 U.S.C. § 3729(a)(3).

107. As a result, federal monies were lost through payments made, and Defendants are liable for treble damages plus the maximum civil penalty of \$21,916 for each and every false and fraudulent claim.

COUNT V

California False Claims Act
(Cal. Gov't Code § 12650 et seq)

108. Relator repeats and incorporates the preceding paragraphs of the Complaint as if fully set forth herein.

109. This is a claim for penalties and treble damages for violation of the California False Claims Act.

110. By virtue of the acts described above, Defendants, for the purpose of defrauding the California State Government, knowingly presented and/or caused to be presented false claims for payment or approval under the Federal Highway Aid program, the state Transportation Aid program and other California State-funded programs to officers or employees of the state within the meaning of Cal. Gov't Code § 12651(a)(1).

111. By virtue of the acts described above, Defendants, for the purpose of defrauding the California State Government, knowingly made, used, and/or caused to be made or used, false records or statements to get false claims paid or approved within the meaning of Cal. Gov't Code § 12651(a)(2).

112. The California State Government, unaware of the falsity, paid claims that it would not have paid had it known of Defendants' practices.

113. As a result, California State monies were lost through payments made because of the claims, and other costs and losses were sustained by the California State Government.

114. Therefore, the California State Government has been damaged in an amount to be proved at trial and is entitled to treble damages as permitted by statute.

115. Additionally, the California State Government is entitled to the maximum penalty of \$21,916 for each and every false claim presented and caused to be presented by Defendants and arising from their conduct as described herein.

COUNT VI

Florida False Claims Act (Fla. Stat. § 68.082 *et seq.*)

116. Relator repeats and incorporates the preceding paragraphs of the Complaint as if fully set forth herein.

117. This is a claim for penalties and treble damages under the Florida False Claims Act.

118. By virtue of the acts described above, Defendants, for the purpose of defrauding the Florida State Government, knowingly presented and/or caused to be presented false claims for payment or approval under the Complaint program, the state Transportation Act, and other Florida State-funded programs to officers or employees of the state within the meaning of Fla. Stat. § 68.082(2)(a).

119. By virtue of the acts described above, Defendants, for the purpose of defrauding the Florida State Government, knowingly made, used, and/or caused to be made or used, false records or statements to get false or fraudulent claims paid or approved within the meaning of Fla. Stat. § 68.082(2)(b).

120. The Florida State Government, unaware of the falsity, paid claims that it would not have paid had it known of Defendants' practices.

121. As a result, Florida State monies were lost through payments made because of the claims, and other costs and losses were sustained by the Florida State Government.

122. Therefore, the Florida State Government has been damaged in an amount to be proved at trial and is entitled to treble damages as permitted by statute.

123. Additionally, the Florida State Government is entitled to the maximum penalty of \$21,916 for each and every false claim presented and caused to be presented by Defendants and arising from their conduct as described herein.

COUNT VII

Georgia Taxpayer Protection False Claims Act (Ga. Code Ann. § 23-3-120 et seq.)

124. Relator repeats and incorporates the preceding paragraphs of the Complaint as if fully set forth herein.

125. This is a claim for penalties and treble damages under the Georgia State False Federal Highway-Aid program Claims Act.

126. By virtue of the acts described above, Defendants, for the purpose of defrauding the Georgia State Government, knowingly presented and/or caused to be presented to the Georgia Federal Highway-Aid program program false or fraudulent claims for payment or approval within the meaning of Ga. Code Ann. § 23-3-120 et seq.

127. By virtue of the acts described above, Defendants, for the purpose of defrauding the Georgia State Government, knowingly made, used, and/or caused to be made or used, false records or statements to get false or fraudulent claims paid or approved through the Complaint program, the Georgia Transportation Aid program, and other state programs within the meaning of Ga. Code Ann. § 23-3-120 et seq

128. The Georgia State Government, unaware of the falsity, paid claims that it would not have paid had it known of Defendants' practices.

129. As a result, Georgia State monies were lost through payments made because of the claims, and other costs and losses were sustained by the Georgia State Government.

130. Therefore, the Georgia State Government has been damaged in an amount to be proved at trial and is entitled to treble damages as permitted by statute.

131. Additionally, the Georgia State Government is entitled to the maximum penalty of \$11,000 for each and every false or fraudulent claim presented or caused to be presented by Defendants and arising from their conduct as described herein.

COUNT VIII

Maryland False Claims Act
(Md. Gen. Code § 8-101 et seq.)

132. Relator repeats and incorporates the preceding paragraphs of the Complaint as if fully set forth herein.

133. This is a claim for a fine and damages under the Maryland False Claims Act.

134. By virtue of the acts described above, Defendants, for the purpose of defrauding the Maryland State Government, knowingly engaged in misrepresentations to obtain, or attempt to obtain, payment from medical assistance program funds within the meaning of Md. Gen. Code 8-101 et seq.

135. The Maryland State Government, unaware of the falsity, paid claims that it would not have paid had it known of Defendants' practices.

136. As a result, Maryland State monies were lost through payments made because of the claims, and other costs and losses were sustained by the Maryland State Government.

137. Therefore, the Maryland State Government has been damaged in an amount to be proved at trial.

138. Additionally, the Maryland State Government is entitled to the maximum civil penalties, the maximum fine in the amount of three times the amount of actual damages sustained as a result of the violations described herein. Md. Gen. Code 8-101

COUNT IX

Massachusetts False Claims Act
(Mass. Gen. L. Ch. 12, § 5 et seq.)

139. Relator repeats and incorporates the preceding paragraphs of the Complaint as if fully set forth herein.

140. This is a claim for penalties and treble damages under the Massachusetts False Claims Act.

141. By virtue of the acts described above, Defendants, for the purpose of defrauding the Massachusetts Commonwealth Government, knowingly made, used, and/or caused to be made or used, false records or statements to obtain payment or approval of claims by the Commonwealth within the meaning of Mass. Gen. L. Ch. 12, § 5B.

142. The Massachusetts Commonwealth Government, unaware of the falsity, paid claims that it would not have paid had it known of Defendants' practices.

143. As a result, Massachusetts Commonwealth monies were lost through payments made because of the claims, and other costs and losses were sustained by the Massachusetts Commonwealth Government.

144. Therefore, the Massachusetts Commonwealth Government has been damaged in an amount to be proved at trial and is entitled to treble damages as permitted by statute.

145. Additionally, the Massachusetts Commonwealth Government is entitled to the maximum penalty of \$21,916 for each and every false or fraudulent claim paid or approved arising from the Defendants' conduct as described herein.

COUNT X

Minnesota False Claims Act
(Minn. Stat. § 15C.01 *et seq.*)

146. Relator repeats and incorporates the preceding paragraphs of the Complaint as if fully set forth herein.

147. This is a claim for penalties and treble damages under the Minnesota False Claims Act.

148. By virtue of the acts described above, Defendants, for the purpose of defrauding the Minnesota Government, knowingly made, used, and/or caused to be made or used, false records or statements to obtain payment or approval of claims by the Minnesota Government within the meaning of Minn. Stat § 15C.01.

149. The Minnesota Government, unaware of the falsity, paid claims that it would not have paid had it known of Defendants' practices.

150. As a result, Minnesota monies were lost through payments made because of the claims, and other costs and losses were sustained by the Minnesota Government.

151. Therefore, the Minnesota Government has been damaged in an amount to be proved at trial and is entitled to treble damages as permitted by statute.

152. Additionally, the Minnesota Government is entitled to the maximum penalty of \$11,000 for each and every false or fraudulent claim paid or approved arising from the Defendants' conduct as described herein as well.

COUNT XI

New Jersey False Claims Act
(N.J.S.A. § 2A:32C-1 *et seq.*)

153. Relator repeats and incorporates the preceding paragraphs of the Complaint as if fully set forth herein.

154. This is a claim for penalties and treble damages under the New Jersey False Claims Act.

155. By virtue of the acts described above, Defendants, for the purpose of defrauding the New Jersey State Government, knowingly presented and/or caused to be presented false claims for payment under the Complaint program, the New Jersey Transportation Act, and other New Jersey State-funded programs within the meaning of N.J.S.A. § 2A:32C-2.

156. The New Jersey State Government, unaware of the falsity, paid claims that it would not have paid had it known of Defendants' practices.

157. As a result, New Jersey State monies were lost through payments made because of the claims, and other costs and losses were sustained by the New Jersey State Government.

158. Therefore, the New Jersey State Government has been damaged in an amount to be proved at trial and is entitled to treble damages as permitted by statute.

159. Additionally, the New Jersey State Government is entitled to the maximum penalty under N.J.S.A. § 2A:32C-3 for each and every false claim presented and caused to be presented by Defendants and arising from their conduct as described herein.

COUNT XII

New York False Claims Act (N.Y. State Fin. Law § 189(1)(a)-(b) et seq)

160. Relator repeats and incorporates the preceding paragraphs of the Complaint as if fully set forth herein.

161. This is a claim for penalties and treble damages under the New York False Claims Act.

162. By virtue of the acts described above, Defendants, for the purpose of defrauding the New York State Government, knowingly presented and/or caused to be presented false claims for payment or approval the Complaint program, New York's Transportation Aid program, and other New York State-funded programs to officers or employees or agents of the state within the meaning of N.Y. State Fin. Law § 189(1)(a).

163. By virtue of the acts described above, Defendants, for the purpose of defrauding the New York State Government, knowingly made, used, and/or caused to be made or used, false records or statements to get false claims paid or approved within the meaning of N.Y. State Fin. Law § 189(1)(b).

164. The New York State Government, unaware of the falsity, paid claims that it would not have paid had it known of Defendants' practices.

165. As a result, New York State monies were lost through payments made because of the claims, and other costs and losses were sustained by the New York State Government.

166. Therefore, the New York State Government has been damaged in an amount to be proved at trial and is entitled to treble damages as permitted by statute.

167. Additionally, the New York State Government is entitled to the maximum penalty of \$12,000 for each and every false claim presented and caused to be presented by Defendants and arising from their conduct as described herein.

COUNT XIII

North Carolina False Claims Act (N.C.G.S.A. § 1-605 et seq.)

168. Relator repeats and incorporates the preceding paragraphs of the Complaint as if fully set forth herein.

169. This is a claim for penalties and treble damages under the North Carolina False Claims Act.

170. By virtue of the acts described above, Defendants, for the purpose of defrauding the North Carolina State Government, knowingly presented and/or caused to be presented false claims for payment or approval under Federal Highway-Aid program and other North Carolina State-funded programs to officers or employees of the state within the meaning of N.C.G.S.A. § 1-606.

171. The North Carolina State Government, unaware of the falsity, paid claims that it would not have paid had it known of Defendants' practices.

172. As a result, North Carolina State monies were lost through payments made because of the claims, and other costs and losses were sustained by the North Carolina State Government.

173. Therefore, the North Carolina State Government has been damaged in an amount to be proved at trial and is entitled to treble damages as permitted by statute.

174. Additionally, the North Carolina State Government is entitled to the maximum penalty of \$11,000 for each and every false claim presented and caused to be presented by Defendants and arising from their conduct as described herein.

COUNT XIV

Rhode Island State False Claims Act
(Gen. Laws 1956, § 9-1.1-1 et seq)

175. Relator repeats and incorporates the preceding paragraphs of the Complaint as if fully set forth herein.

176. This is a claim for penalties and treble damages under the Rhode Island State False Claims Act.

177. By virtue of the acts described above, Defendants, for the purpose of defrauding the Rhode Island State Government, knowingly presented and/or caused to be presented false claims for payment or approval under Federal Highway-Aid program, the Rhode Island Transportation Aid program, and other Rhode Island State-funded programs to officers or employees of the state within the meaning of Gen. Laws 1956, § 9-1.1-3.

178. The Rhode Island State Government, unaware of the falsity, paid claims that it would not have paid had it known of Defendants' practices.

179. As a result, Rhode Island State monies were lost through payments made because of the claims, and other costs and losses were sustained by the Rhode Island State Government.

180. Therefore, the Rhode Island State Government has been damaged in an amount to be proved at trial and is entitled to treble damages as permitted by statute.

181. Additionally, the Rhode Island State Government is entitled under Gen. Laws 1956, § 9-1.1-3 to the maximum penalty of \$21,916 for each and every false claim presented and caused to be presented by Defendants and arising from their conduct as described herein.

COUNT XV

Tennessee False Claims Act (Tenn. Code Ann. § 4-18-101 et seq)

182. Relator repeats and incorporates the preceding paragraphs of the Complaint as if fully set forth herein.

183. This is a claim for penalties and treble damages under the Tennessee False Claims Act.

184. By virtue of the acts described above, Defendants, for the purpose of defrauding the Tennessee State Government, knowingly presented and/or caused to be presented false claims for payment or approval under Federal Highway-Aid program, the Tennessee

Transportation Aid program, and other Tennessee State-funded programs to officers or employees of the state within the meaning of Tenn. Code Ann. § 4-18-103(a)(1).

185. By virtue of the acts described above, Defendants, for the purpose of defrauding the Tennessee State Government, knowingly made, used, and/or caused to be made or used, false records or statements to get false claims paid or approved within the meaning of Tenn. Code Ann. § 4-18-103(a)(2).

186. The Tennessee State Government, unaware of the falsity, paid claims that it would not have paid had it known of Defendants' practices.

187. As a result, Tennessee State monies were lost through payments made because of the claims, and other costs and losses were sustained by the Tennessee State Government.

188. Therefore, the Tennessee State Government has been damaged in an amount to be proved at trial and is entitled to treble damages as permitted by statute.

189. Additionally, the Tennessee State Government is entitled to the maximum penalty of \$21,916 for each and every false claim presented and caused to be presented by Defendants and arising from their conduct as described herein.

COUNT XVI

Virginia Fraud Against Taxpayers Act (Va. Code Ann. § 8.01-216 et seq.)

190. Relator repeats and incorporates all of the preceding paragraphs of the Complaint as if fully set forth herein.

191. This is a claim for penalties and treble damages under the Virginia Fraud Against Taxpayers Act.

192. By virtue of the acts described above, Defendants, for the purpose of defrauding the Virginia Commonwealth Government, knowingly presented and/or caused to be presented

false or fraudulent claims for payment or approval under Federal Highway-Aid program, the Commonwealth Transportation Aid program, and other Virginia Commonwealth-funded programs to officers or employees of the Commonwealth within the meaning of Va. Code Ann. § 8.01-216.3(A)(1).

193. By virtue of the acts described above, Defendants, for the purpose of defrauding the Virginia Commonwealth Government, knowingly made, used, and/or caused to be made or used, false records or statements to get false or fraudulent claims paid or approved by the Commonwealth under Federal Highway-Aid program and Virginia Commonwealth-funded programs within the meaning of Va. Code Ann. § 8.01-216.3.

194. The Virginia Commonwealth Government, unaware of the falsity, paid claims that it would not have paid had it known of Defendants' practices.

195. As a result, Virginia Commonwealth monies were lost through payments made because of the claims, and other costs and losses were sustained by the Virginia Commonwealth Government.

196. Therefore, the Virginia Commonwealth Government has been damaged in an amount to be proved at trial and is entitled to treble damages as permitted by statute.

197. Additionally, the Virginia Commonwealth Government is entitled to the maximum penalty of \$21,916 for each and every false or fraudulent claim presented and caused to be presented by Defendants and arising from their conduct as described herein.

PRAYER FOR RELIEF

WHEREFORE, Relator prays for the following relief:

A. Judgment in an amount equal to treble the damages to be proved at trial against Defendants and in favor of the United States, plus a civil penalty of up to \$21,916 for each violation of 31 U.S.C. § 3729 proved at trial;

B. Judgment in an amount equal to treble the damages to be proved at trial against Defendants and in favor of the State of California, plus a civil penalty of \$21,916 for each violation of Cal. Gov't Code § 12651 proved at trial;

C. Judgment in an amount equal to treble the damages to be proved at trial against Defendants and in favor of the State of Florida, plus a civil penalty of \$21,916 for each violation of Fla. Stat. Ann. § 68.082 proved at trial;

D. Judgment in an amount equal to threefold the damages to be proved at trial against Defendants and in favor of the State of Georgia, plus a civil penalty of \$11,000 for each violation of Ga. Code Ann. § 49-4-168.1 proved at trial;

E. Judgment in an amount equal to treble the damages plus penalties to be proved at trial against Defendants and in favor of the State of Maryland;

F. Judgment in an amount equal to threefold the damages to be proved at trial against Defendants and in favor of the Commonwealth of Massachusetts, plus a civil penalty of \$21,916 for each violation of Mass. Gen. L. Ch. 12, § 5B proved at trial;

G. Judgment in an amount equal to treble the damages to be proved at trial against Defendants and in favor of the State of Minnesota, plus a civil penalty of \$21,916 for each violation of Minn. Stat § 15C.01 proved at trial;

H. Judgment in an amount equal to treble the damages to be proved at trial against Defendants and in favor of the State of New Jersey, plus a civil penalty of \$21,916 for each violation of N.J.S.A. § 2A:32C-2 proved at trial;

I. Judgment in an amount equal to treble the damages to be proved at trial against Defendants and in favor of the State of New York, plus a civil penalty of \$12,000 for each violation of N.Y. State Fin. Law § 189 proved at trial;

J. Judgment in an amount equal to treble the damages to be proved at trial against Defendants and in favor of the State of North Carolina, plus a civil penalty of \$11,000 for each violation of N.C.G.S.A. § 1-606 proved at trial.

K. Judgment in an amount equal to treble the damages to be proved at trial against Defendants and in favor of the State of Tennessee, plus a civil penalty of \$21,916 for each violation of Tenn. Code Ann. § Tenn. Code Ann. § 4-18-103 proved at trial;

L. Judgment in an amount equal to treble the damages to be proved at trial against Defendants and in favor of the State of Tennessee, plus a civil penalty of \$21,916 for each violation of Tenn. Code Ann. § 71-5-182 proved at trial;

M. Judgment in an amount equal to treble the damages to be proved at trial against Defendants and in favor of the Commonwealth of Virginia, plus a civil penalty of \$21,916 for each violation of Va. Code Ann. § 8.01-216.3 proved at trial;

N. An award to Relator of the maximum amount allowed pursuant to 31 U.S.C. § 3730(d) and equivalent provisions in the state statutes set forth above, including the costs and expenses of this action and reasonable attorneys' fees;

O. All such other, further and different relief, whether preliminary or permanent, legal, general or equitable, as the Court deems just and proper.

JURY DEMAND

Relator hereby demands a trial by Jury in this matter.

Respectfully submitted,

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EXHIBIT A

Post-Testing Deviations/ Changes

1. The first set of changes are changes made to the X-LITE system that was approved by the FHWA. These are very significant in and of themselves.
2. The second set of changes have to do with Lindsay Corporation's 50' X-LITE system. The Lindsay Corporation made a reckless decision when it gave up control of the X-LITE beyond Post 7. This allowed for major deviations from the as tested X-LITE. This also gave Lindsay Corporation a pre-text by which to reinsert the bolt at Post 7 which they originally instructed end users to omit.
3. The third set of changes have to do with Lindsay Corporation's deceptive attempt to present the X-LITE as an MGS/ MASH terminal.
4. The fourth set of changes have to with Lindsay Corporation's deadly marketing which suggested the 37.5' X-LITE could be installed into concrete with only an approved transition.
5. The final set of changes is not quantified but it is those beyond the 62.5'/ 65' of W-Beam that Lindsay Corporation finally instructed its end users to use. This was inadequate because the X-LITE traveled midway down the 6th W-Beam in Test 14. There are dozens upon dozens of potential deviations. The X-LITE should have been a minimum of 75' based on testing. Any deviations in installation from XTL-14 represents a material change.

Some of these changes are less significant and others more. The idea was to quantify the deviations. The quantity of the changes shows a desperation. The progression is highly troubling because it shows the desired result was not achieved.

	Change	Where	Reported	Significance
	DEVICE HEAD			
1	Device head side flange	Field	No	Flanges on both sides are ¼" larger than reported to FHWA. These flanges because they do not include top and bottoms can cut into sheet metal and facilitate piercing.
2	Device head thickness	Field	No	Thickness of head increased by 50% or more. Reported to FHWA ⅛" but field inspections show 3/16" and greater thickness. This increased thickness greatly increases the cutting strength of the X-LITE head

				which made it even more likely to pierce.
3	Device head powder coated	Field	No	
4	Device Head Rail Mount In Field is less robust than in testing	XTL-9 XTL-10 XTL-12 XTL14 Vs. Field	No	<p>This a significant alteration of the Device Head. The head was tested with a more robust steel mount but Lindsay Corporation reported to FHWA that standard W-Beam would be welded to the plate portion of the head to mount the head to Rail 1.</p> <p>It also appears that Lindsay Corporation used a rounded bolt hole for the head mounts in testing but the W-Beam mounts have a slight oval shape associated with W-Beam. This change has allowed head to be torn off or pivoted in multiple fatal incidents.</p>
5	Manufacturer's Sticker on Device	Field	No	This is a seemingly very minor change but it shows Lindsay's general lack of sobriety or seriousness in testing. Most testing engineers are so committed to integrity that they include things that most people would consider unnecessary.
	Rail 1			
6	Rail 1 was powder coated	Field	No	This is a significant alteration to the device head and untested. X-LITE is a friction based system and this would have greatly altered the friction between the rails and increasing stopping distance.
	Post 1			
7	Leading/ Trailing bolt holes were removed from	Field	No	This shows Lindsay Corporation knew they created an uninstallable unit.Lindsay Corporation had marketed and told FHWA, end users, and installers Post 1 and Post 3 were interchangeable.This change

	post 1			made those posts no longer interchangeable. Past marketing, training, and the lack of notification led to installation errors and deficiencies
8	Color Coated marking added to bottom of Post 1	Field	No	Lindsay Corporation added color coating markings to aid in installation but did not report the changes. Simultaneous to this change, Lindsay Corporation changed its manual to black and white which greatly limited the usefulness/ effectiveness of color coating Post 1. Making this even less useful is Lindsay Corporation never notified end users of the change. Past marketing, training, and the lack of notification led to installation errors and deficiencies
9	Post 1 Powder coated	Field	No	This is a significant alteration to the Post 1 and untested.
10-13	Weakened Crimp increased from 1/2"	Field	No	Field inspections show the crimping of Post 1 was increased from 1/2" to 5/8". These changes are cumulative and fundamentally altered the frangibility of Post 1
	Hardware at Post 1			
14	Guardrail bolt with nut	Field	No	This configuration has been observed in field inspections but was never tested in an end on hit
15	1 1/2" bolt with	Field	No	This configuration has been observed in field inspections but was

	guardrail nut			never tested.
16	2" bolt with guardrail nut	Field	No	This configuration has been observed in field inspections but was never tested in an end on hit
17	2 2" Bolts provided	Install manuals	No	Lindsay Corporation manuals stated they provided 2 bolts for Post 1. This recklessness in its manuals played out with real world installation errors and deficiencies.
	Post 1 Offset			
18	Post 1 is offset up to 2"	Field	No	<p>There is no blockout at Post 1 which means the Post is aligned with the back of the rail. In the original drawings this is shown and it does not appear there was a 2" offset in testing.</p> <p>After testing Lindsay Corporation instructed end users to install Post 1 up to 2" back from the string line altering alignment of the rail. The 1st Post should have been flush with string and any Posts with blockouts 7 5/8" from the string to accommodate blockouts.</p>
	Ground Strut Angle			
19	Ground Strut Angle	Field	No	The width of the device has been decreased moving the bolt holes much closer to the edge.
20	Ground Strut Angle	Field	No	The Lindsay Corporation tested the X-LITE with the Angle adjusted for higher heights (Moved up to 3"/ made ground struts parallel). Observations show this part resting on the ground with struts facing down to the leading edge. It was not until the 4th edition of the installation manuals Lindsay Corporation changed this installation.
21	Ground Strut Angle Powder Coated	Field	No	

	Ground Struts			
22/23	Ground Strut length increased by ~ 5-6"	Field	No	This was not reported or tested
23/24	Ground Struts not installed level	Field	No	Lindsay Corporation did not initially instruct end users to installed ground struts level. Later Lindsay Corporation added this to the installation manuals but did not inform end users. Instead they passed off these unlevel struts as installation errors
25-28	Plastic Caps added to all 4 ends of the ground struts	Field	No	Lindsay Corporation added plastic caps to the end of the struts. This was likely a product enhancement but because it was not noted in instructions these parts are often not present. The lack of acknowledgement creates additional product installation errors.
29-32	Ground Strut thickness altered	Field	No	Lindsay Corporation decreased the ground strut thickness from $\frac{5}{8}$ " to $\frac{9}{16}$ " altering the strength of this part. This provided greater movement within the Post 2 Mounts and Strut Angle.
33-34	Ground Strut powder coated	Field	No	
35-38	Size of nuts altered	Field	No	The $\frac{5}{8}$ " nuts were changed to $\frac{9}{16}$ " to accommodate the smaller strut width
	Post 2			
39	Post 2 powder coated	Field	No	
40	Post 2: Bolt Holes	Field	No	The bolt holes were removed from the X-LITE on Post 2. This left only slots. This is a different design from what was reported to the FHWA.

41-44	Post 2: Crimp size	Field	No	<p>The crimps were increased from $\frac{1}{2}$" to $\frac{5}{8}$" X 4 locations. This fundamentally changed the function of the post.</p> <p>These changes are cumulative and fundamentally altered the frangibility of Post 2</p>
332-333	Post 2 BCT Cable connection	Field	No	Front and back connection point altered
	Post 2 Blockout			FLARED X-LITE
45	8" Polymer Blockout used	Field	Yes	This blockout functions differently than the wood blockouts with which the flared X-LITE was tested. The function of the X-LITE is different than other terminals and this is a significant change.
46	12" MGS Blockout	Field	No	This is a significant untested change which could cause system to bind up and pierce vehicle. Lindsay Corporation by marketing "MGS" X-LITES created a fake perception that X-LITE was an actual MGS compliant terminal and that X-LITE was MASH tested.
	Post 2 Hardware			
47	9" Post Bolt: Flared	Field	No	A smaller bolt than the 9 $\frac{1}{2}$ " Bolt that was reported to FHWA was used.
48	9 $\frac{3}{4}$ " Post Bolt: Flared	Field	No	A larger bolt than the 9 $\frac{1}{2}$ " Bolt that was reported to FHWA was used.
49	10" Post Bolt: Flared	Field	No	A larger bolt than the 9 $\frac{1}{2}$ " Bolt that was reported to FHWA was used.
50	~14" Post Bolt: Flared	Field	No	A much larger bolt than the 9 $\frac{1}{2}$ " Bolt that was reported to FHWA was used.
51	1 $\frac{1}{2}$ " Bolt: Tangent	Field	No	This is a larger part than what was tested and approved by FHWA.

52	2" Bolt: Tangent	Field	No	This is a much larger part than what tested and approved by FHWA
	Post 2 Offset			
53	2" offset of Post 2 on Tangent Terminal	Field	No	<p>This offset is not included in original drawings. It does not appear this offset was present in testing. This was likely added later to alter telescoping of the system. The 2" offset is not recommended on the Flared system which uses a blockout.</p> <p>This change was likely done after Lindsay Corporation altered offset on Post 3 to try and prevent X-LITE from binding up as it telescopes.</p>
	BCT CABLE			
54	No BCT Cable Torque recommended	Field	No	The X-LITE was tested with a very loose BCT cable in the end on tests. The X-LITE was originally to be installed without a specified cable torque
55	60# BCT Cable Torque	Field	No	<p>The X-LITE was tested with no torque but Lindsay Corporation later changed this starting in the 4th edition of the installation manuals. Lindsay Corporation later implied the lack of tension could produce deadly outcomes. They passed this off as an installation error.</p> <p>WE DO NOT KNOW BASED ON TESTING HOW THIS WILL FUNCTION AND WHETHER BCT SHOULD BE LOOSE OR TIGHT.</p>
56	Red Warning Label at Post 2	Field	No	X-LITE was tested with a very loose BCT cable in the end on tests. Later BCT cable tension was increased to 60# and this sticker was added as a warning.
57/58	Swage sizes different from what is reported	Field	No	Inspections have revealed the BCT Cable Swage varies by up to ½" on field inspections.
59	2" Washer on front	Field	Not	Inspections have shown this smaller Washer was used

	of BCT Cable		Specified	
60	2 ½" Washer on front of BCT Cable	Field	Not Specified	Inspections have shown this much larger washer with greater thickness used. This would fundamentally alter BCT Cable release.
61	2" Washer on back of BCT Cable	Field	Not Specified	Inspections have shown this smaller Washer was used
62	2 ½" Washer on back of BCT Cable	Field	Not Specified	Inspections have shown this much larger washer with greater thickness used. This would fundamentally alter BCT Cable release.
63	No washer on back of BCT Cable	Field	No	Inspections and instruction manuals show this change was made. There used to be THREE washers of the same size. Two were used on the BCT Cable and one at the Post 3 Connection. When this washer was dropped installation errors involving these 3 locations appear to have increased greatly.
64	BCT thread location altered	Field	No	Some type of change was made which moved the location of the threads of the BCT Cable at the Slider Bracket. In testing the threads were in line with the rear slider assembly but in the field they are behind the rear slider assembly. This was likely accomplished by a combination of multiple changes but is a change in and of itself. This change also altered how the system interacts.
	BCT Cable Clip			
65	Part Added after testing	CC-120A	Yes	Lindsay did not test X-LITE with cable tension and this part was added to ensure BCT cable remained engaged over time. This part was added without a full scale crash test.
	Post 3			
66	Color coded	Field	No	Lindsay Corporation added color coating markings to aid in installation

	marks added to Post 3			<p>but did not report the changes.</p> <p>Simultaneous to this change, Lindsay Corporation changed its manual to black and white which greatly limited the usefulness/ effectiveness of color coating Post 3</p>
67	Powder Coated Post 3	Field	No	
68-71	Weakened Crimp increased from ½"	Field	No	<p>Field inspections show the crimping of Post 1 was increased from ½" to ⅝".</p> <p>This fundamentally altered the frangibility of Post 3</p>
	Post 3 Blockout			
72	8" Wood	Field	Yes	This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
73	8" Polymer	Field	Yes	This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
74	12" Polymer	Field	No	This is a significant untested change which could cause system to bind up and pierce vehicle.
	Post 3 Hardware			
75	9" Bolt	Field	No	A smaller bolt than the 9 ½" bolt that was reported to FHWA was used.
76	9 ¾" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.
77	10" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.

78	~14" Bolt	Field	No	A much larger bolt than the 9 ½" that was reported to FHWA was used.
	Post 3 Connection			
79	Bolt moved from rear open slot to a hole on the leading edge of Post 3 FLARED	Field	No	This is a very major change to the X-LITE. The Flared X-LITE requires this connection to be on the trailing end of the post. This would impact telescoping ability of the Flared X-LITE. This was maintained through late editions of the Flared installation manuals
80	Bolt installed in a trailing edge of Post 3 but in a bolt hole and not slot.	Field	No	Drawings and inspections show Florida and other entities were instructed to install the X-LITE using a trailing end bolt hole rather than a slot.
	Post 3 Offset			
81	Post 3 is Offset up to 2"	Field	No	<p>Drawings submitted to FHWA do not show this change. It does not appear the change was present in testing.</p> <p>Statements from Lindsay shows this is a material change as it was done to accommodate the interaction of the Slider Bracket with the system. The photo in installation manual is greater than 2".</p>
	Soil Plate			
82	Soil Plate decreased in size by more than half	CC-120B Field	Yes	Lindsay Corporation sought approval for a much smaller soil plate. Original size was 576 square inches but it was decreased to 270 inches. Was not crash tested but supported with FEA.
83	Soil Plate. Edges 9"x6" Not chamfered (6"x6")	Post CC-120-B	No	Lindsay <u>inaccurately</u> described edges as being chamfered and <u>removed an additional 18 square inches off soil plate.</u> Post 2 anchorage has failed on numerous incidents.

	Front Slider Assembly			
84	Front Slider Assembly powder coated	Field	No	This is an untested change.
85	Front Slider Assembly weld added	Field	No	Lindsay Corporation added the angled weld in early 2012/ 2013. This was not crash tested and shows progression in the change. The welded panel added later has been shown to snag.
85	Angled Notch and arrow added to Front Slider assembly	Field	No	This was likely done to aid with proper installation but Lindsay Corporation provides instructions to <i>"The angled portion of the Slider Panel should extend beyond the end of the rail and should face the trailing / back of the system when assembled in step 18."</i>
87	Front Slider Assembly trailing end increased to 2" from 1 ½"	Field	No	In 2014 Lindsay Corporation added to its earlier change in 2013. This part as noted has snagged leading in fatal incidents
88	Front Slider Assembly trailing end increased to 3 ¼" from 2"	Field	No	In 2015/ 2016 Lindsay Corporation added to its earlier change in 2014. This part as noted has snagged leading in fatal incidents. This continued progression in the changes is very concerning because Lindsay was testing its change on the traveling public.
89	Front Slider Assembly leading edge decreased from 1 ¼" to ¾"	Field	No	In 2014 Lindsay Corporation made this change.
90	Front Slider Assembly total length increased	Field	No	This increase in size corresponds with change #115

	by 1 ¼"			
91	Front Slider Assembly height	Field	No	Total height of this part has shown to be up to ½" larger than reported.
	Rear Slider Assembly			
92	Rear Slider Assembly powder coated	Field	No	This is another untested change
93/94	Two holes added to the Rear Slider Panel	Field	No	This is an untested/ unreported change on a key energy absorbing part.
95	The height of the rear reinforced part of the Rear Slider panel was decreased in size by ½"	Field	No	This is an untested/ unreported change on a key energy absorbing part.
96	The width of the rear reinforced part of the Rear Slider panel was decreased in size by 1/8" or more	Field	No	This is an untested/ unreported change on a key energy absorbing part.
	Washer at Post 3			These correspond with installation manual instructions
97	2" washer used at connection OVER	Field	No	This change has been seen in the field and corresponds with installation instructions.

	Rear Slider Panel			
98	2 ½" washer used at connection OVER Rear Slider Panel	Field	No	This change has been seen in the field and corresponds with installation instructions.
99	2" Washer used UNDER Rear Slider Panel	Field	No	This change has been seen in the field and corresponds with installation instructions.
100	No Washer	Field	No	This is closely associated with the washer changes to BCT Cable. Lindsay Corporation previously provided 3 washers and changed to 2 leaving installers forced to decide where not to place the washer.
	Slider Bracket			
101	Length of Slider Bracket	Field	No	The length of this part is measuring about ¼" shorter than reported size to FHWA
102	Slider Tube increased to 2 ½" from 2"	Field	No	This tube holds the BCT Cable and was increased in width. This allows the BCT Cable to wedge in the tube and has driven the device head past 2nd rail.
103	Angle iron increased from 2" to 2 ½"	Field	No	This is designed to prevent rail rupture on a redirection hit. This change was tested on the public
104	Installation of Slider Bracket on Flared X-LITE	Field	No	<p>Through the 10th version of the X-LITE flared manuals Lindsay Corporation instructed end users to install this part on the trailing end of rail 2 while it is supposed to be installed on the leading edge of rail 2. There is a death associated with improper installation of this part but not directly with this exact instructions.</p> <p>This shows a deep contempt for the traveling public and complete</p>

				disdain for the traveling public.
105	Shape of the Slider Bracket Angle	Field	No	The shape of the Angle Iron was altered from the original crash testing.
	Rail 2			
106	Rail 2 Powder coated	Field	No	This is another untested change.
107	Rail 2 must only be lapped OVER Rail 3.	Field	No	On trailing end terminals FHWA guidance is to install in the direction of traffic. X-LITE must be installed with rail 2 lapping over rail 3. This is a known lethal change which Lindsay Corporation passed off as an installation error. The facts are Lindsay did not instruct installers on this issue until very late editions of the installation manual and these were installed properly as per design standards.
	Post 4			
108	Powder Coated Post 4	Field	No	
109-112	Flared X-LITE Weakened Crimp increased from 1/2"	Field	No	Field inspections show the crimping of Post 1 was increased from 1/2" to 5/8". This fundamentally altered the frangibility of Post 1
113	Tangent Post 4 with open slots	Install manuals	No	Lindsay Corporation instructed installers to install posts with open slots at Post 4-6 with slots away from rail. There is no posts 4-6 with slots and this promoted installation errors.
	Post 4 Blockout			

114	8" Wood	Field	Yes	This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
115	8" Polymer	Field	Yes	This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
116	12" Polymer	Field	No	This is a significant untested change which could cause system to bind up and pierce vehicle.
	Post 4 Hardware			
117	9" Bolt	Field	No	A smaller bolt than the 9 ½" bolt that was reported to FHWA was used.
118	9 ¾" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.
119	10" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.
120	~14" Bolt	Field	No	A much larger bolt than the 9 ½" that was reported to FHWA was used.
	Post 5			
121	Powder Coated Post 5	Field	No	
122-125	Flared X-LITE Weakened Crimp increased from ½"	Field	No	Field inspections show the crimping of Post 1 was increased from ½" to 5/8". This fundamentally altered the frangibility of Post 1
126	Tangent Post 4 with open slots	Install manuals	No	Lindsay Corporation instructed installers to install posts with open slots at Post 4-6 with slots away from rail. There is no posts 4-6 with slots and this promoted installation errors.

	Post 5 Blockout			
127	8" Wood	Field	Yes	This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
128	8" Polymer	Field	Yes	This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
129	12" Polymer	Field	No	This is a significant untested change which could cause system to bind up and pierce vehicle.
	Post 5 Hardware			
130	9" Bolt	Field	No	A smaller bolt than the 9 ½" bolt that was reported to FHWA was used.
131	9 ¾" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.
132	10" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.
133	~14" Bolt	Field	No	A much larger bolt than the 9 ½" that was reported to FHWA was used.
	Rail 2/ 3 Connection			
134-141	Washers used on Shear Bolts between Rail 3 and Guardrail nut	XTL-9 XTL-10 XTL-12 XTL-14 Field	No	The X-LITE shear bolts were tested with a nut on the shear bolts but installation manuals/ drawings and what was reported to FHWA do not show this part being used. This has caused installers to decide for themselves what to do with these extra parts.
142-149	Washers not used on Shear Bolts	XTL-4 Field	Yes/No	The X-LITE shear bolts were tested with a nut on the shear bolts but installation manuals/ drawings do not show this part being used. This has caused installers to decide for themselves what to do with these

				extra parts.
150-157	Washers installed between Bolt and Rail 2	Field	No	The X-LITE shear bolts were tested with a nut on the shear bolts but installation manuals/ drawings do not show this part being used. This has caused installers to decide for themselves what to do with these extra parts.
158-165	Shear Bolts are heavily oxidized	Field	No	The Lindsay Corporation reported these bolts meet ASTM galvanization standards but field inspections reveal they are heavily oxidized. We simply do not know how the X-LITE's shear bolts will function over time.
	Rail 3			
166	Rail 3 Powder coated	Field	No	
167	Rail 3 must only be lapped OVER Rail 4.	Field	No	On trailing end terminals FHWA guidance is to install in the direction of traffic. X-LITE must be installed with rail 2 lapping over rail 3. This is a known lethal change which Lindsay Corporation passed off as an installation error. The facts are Lindsay did not instruct installers on this issue until very late editions of the installation manual
168	Rail 3 is 15.5'	Field	No	This is an unapproved alteration of the Flared X-LITE's 3rd panel to get to a MGS rail seem between Post 7 and Post 8
	Post 6			
169	Powder Coated Post 6	Field	No	
170-173	Flared X-LITE Weakened Crimp	Field	No	Field inspections show the crimping of Post 1 was increased from ½" to ⅝".

	increased from ½"			This fundamentally altered the frangibility of Post 1
174	Tangent Post 6 with open slots	Install manuals	No	Lindsay Corporation instructed installers to install posts with open slots at Post 4-6 with slots away from rail. There is no posts 4-6 with slots and this promoted installation errors.
	Post 6 Blockout			
175	8" Wood	Field		This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
176	8" Polymer	Field		This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
177	12" Polymer	Field		This is a significant untested change which could cause system to bind up and pierce vehicle.
	Post 6 Hardware			
178	9" Bolt	Field	No	A smaller bolt than the 9 ½" bolt that was reported to FHWA was used.
179	9 ¾" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.
180	10" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.
181	~14" Bolt	Field	No	A much larger bolt than the 9 ½" that was reported to FHWA was used.
	Shear Bolts at Rail 3/ 4 Connection			
182-	Washers used on	XTL-12	No	The X-LITE shear bolts were tested with a nut on the shear bolts but

189	Shear Bolts between Rail 4 and Guardrail nut	XTL-14 Field		installation manuals/ drawings do not show this part being used. This has caused installers to decide for themselves what to do with these extra parts.
190-197	Washers not used on Shear Bolts	XTL-4 Field	Yes/No	The X-LITE shear bolts were tested with a nut on the shear bolts but installation manuals/ drawings do not show this part being used. This has caused installers to decide for themselves what to do with these extra parts.
198-205	Washers installed between Bolt and Rail 3	Field	No	The X-LITE shear bolts were tested with a nut on the shear bolts but installation manuals/ drawings do not show this part being used. This has caused installers to decide for themselves what to do with these extra parts.
206-213	Shear Bolts are heavily oxidized	Field	No	The Lindsay Corporation reported these bolts meet ASTM galvanization standards but field inspections reveal they are heavily oxidized. We simply do not know how the X-LITE's shear bolts will function over time.
	Offset			
214	Offset of 2' over 37.5' X-LITE	Field	No	The X-LITE was not tested with an offset yet Lindsay Corporation sought approval for an X-LITE with a 1' offset. The only time X-LITE was tested with an offset was by Virginia DOT(1' over 50') and the X-LITE decoupled. This 2' offset over 37.5' is well above roadside design standards. There were specific modifications made to the flared X-LITE because of the angle of impact including the use of fewer shear bolts, frangible posts, blackout at Post 2, and bolt placement. These X-LITES are not going to function and will spear or rollover a vehicle.
215	Offset of 18" over 37.5' X-LITE	Field	No	The concerns above follow through to this application. These are both major material changes to the X-LITE. This change is

				indicative that someone at Lindsay Corporation realized the above offset was well outside design standards for a tangent terminal
	End	OF		FHWA APPROVED X-LITE
	Examining the 50' X-LITE			<p>Lindsay Corporation began to market a 50' X-LITE which was not approved by the FHWA. This was likely done for a number of reasons.</p> <ol style="list-style-type: none"> 1. Lindsay had tested X-LITE without a bolt at Post 7 but did not seek approval from FHWA for a bolt at Post 7. Lindsay needed a pre-text to re-insert this bolt and pass off its design change as an installation issue 2. Lindsay knew it needed to control the 4th panel, connections, blockouts, and bolts to ensure any possible chance of proper function of the system. 3. Lindsay knew end users wanted and expected a 50' system so this allowed them to appear to add capacity without adding any additional energy absorption capacity. <u>If an SKT, ET 2000/+, FLEAT, or Soft Stop were to travel 50' this would represent additional energy absorption.</u> <p><u>This is not an FHWA approved system.</u></p>
	Post 7			
216	Steel Post	XTL-4 XTL-9 XTL-10 XTL-12 XTL-14 Field	No	This Post is essential for the X-LITE to trigger but Lindsay Corporation did not include it in the original drawings submitted to FHWA.
217	Wood Post	Field	No	The X-LITE was tested with a steel post. Function at Post 7 is key to the system triggering properly. We simply do not know how the X-LITE will function under these circumstances.

218	Weak Post	Field	No	
219	Powder Coated Post 7	Field	No	This is an unapproved alteration of a very critical part necessary for the X-LITE to function.
	Post 7 Blockout			
220	8" Wood	Field		This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
219	8" Polymer	Field		This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
220	12" Polymer	Field		This is a significant untested change which could cause system to bind up and pierce vehicle.
221	Steel Blockout	Field		This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
222	No Blockout	Field		This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
	Post 7 Hardware			
223	9" Bolt	Field	No	A smaller bolt than the 9 ½" bolt than what was reported to FHWA in the approved X-LITE system
224	9 ¾" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA in the approved X-LITE system.
225	10" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA in the approved X-LITE system.
226	~14" Bolt	Field	No	A much larger bolt than the 9 ½" that was reported to FHWA in the approved X-LITE system.

	Post 7 Hardware Placement			
227	Bolt passing through rails 3/ 4 and mounted to Post 7	XTL-12 XTL-14 Field	No	The X-LITE was tested in this configuration but under CC-120 the Lindsay Corporation did not include this bolt with the X-LITE system despite the X-LITE patent describing this as the essential part necessary for the system to function.
228	Bolt at Post 7 not passing through rails 3/ 4 and mounted to Post 7	Field	No	<p><u>The Lindsay Corporation instructed end users to install the X-LITE without a bolt passing through rails 3 / 4 at post 7 through the 4th edition of the X-LITE installation manuals.</u></p> <p><u>HUNDREDS OF FIELD INSPECTIONS CONFIRM X-LITES INSTALLED IN THIS MANNER.</u></p> <p>Hundreds of field inspections have revealed many X-LITES were installed in this lethal manner. Lindsay Corporation later instructed end users to change this and required a bolt at Post 7 passing through Rails 3/ 4 but still continues not providing the essential part necessary function even today.</p> <p>THIS IS KNOWN AND WANTON DISREGARD TO HUMAN LIFE.</p>
	Rail 4			
229	12.5' W-Beam Panel	XTL-4 XTL-9 XTL-10 XTL-12 XTL-14 Field	No	The X-LITE was tested with a 12.5' W beam for the 4th panel. This 4th panel according to the X-LITE Patent is essential to function but <u>Lindsay Corporation did not include it in the approved drawings sent to FHWA but sought approval for the X-LITE with just 3 W-Beam panels.</u>
230	3' W-Beam to Thrie Beam	Field	No	Lindsay Corporation instructed end users they could install the 37.5' X-LITE into rigid barrier with only an approved transition. The X-LITE

	transition			required 6 12.5' w-beam. This will not allow the 3rd W-beam to telescope and will produce lethal outcomes.
231	25' W-Beam rail	Field	No	Lindsay Corporation later required the addition of at least 25' of W-Beam downstream of Post 7 but did not include this with the X-LITE. This W-Beam does not telescope and will act as a rigid spear.
232	Powder Coated 4th rail	Field	No	
233	FHWA Approved transitions	Field	No	The 37.5' X-LITE has been installed into more rigid FHWA approved transitions as a 4th rail. The X-LITE was never crash tested in this manner and given the greater number of posts and other factors this would likely produce lethal outcomes.
	Post 8			This is a Lindsay required part but Lindsay does not provide it on all installs. Instructions not clear past 37.5'
234	Steel Post	XTL-4 XTL-9 XTL-10 XTL-12 XTL-14 Field	No	This Post is essential for the X-LITE to trigger but Lindsay Corporation did not include it in the original drawings submitted to FHWA.
235	Wood Post	Field	No	The X-LITE was tested with a steel post. Function at Post 7 is key to the system triggering properly. We simply do not know how the X-LITE will function under these circumstances.
236	Weak Post	Field	No	This is another example of what can/ did happen once Lindsay Corporation gave up control of this critical part.
237	Powder Coated Post 8	Field	No	This is an unapproved alteration of a very critical part necessary for the X-LITE to function.

238	No post where there should be a Post 8	Field	No	This part is necessary to control the proper triggering of the X-LITE
239	Steel Thrie Beam Post	Field	No	This is a very dangerous rigid barrier
	Post 8 Blockout			This is a Lindsay required part but Lindsay does not provide it on all installs. Instructions not clear past 37.5'
240	8" Wood	Field		This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
241	8" Polymer	Field		This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
242	12" Polymer	Field		This is a significant untested change which could cause system to bind up and pierce vehicle.
243	Steel Blockout	Field		This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
244	No Blockout	Field		This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
245	No Blockout because there is no post	Field		This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
246	Thrie Beam Blockout	Field		This is a much larger blockout and far more substantive.
	Post 8 Hardware			This is a Lindsay required part but Lindsay does not provide it on all installs. Instructions not clear past 37.5' which leads to installations which have not been tested or approved.

247	9" Bolt	Field	No	A smaller bolt than the 9 ½" bolt that was reported to FHWA was used.
248	9 ½" Bolt	XTL-4 XTL-9 XTL-10 XTL-12 XTL-14	No	This was the bolt size used in Testing but Lindsay Corporation did not include a Post 8 Bolt
249	9 ¾" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.
250	10" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.
251	~14" Bolt	Field	No	A much larger bolt than the 9 ½" that was reported to FHWA was used.
252	No hardware		No	This altered the strength and performance of the release of this connection in testing
	2 bolts	Field	No	The Thrie beam mounts to the Post with 2 bolts further ensuring there will be no telescoping and outcomes will prove lethal
	Bolts @ Post 9 Between Rails 4/ 5			
253- 260	Standard splice bolts were used at this location between the 4th and 5th rail Shear Bolts used at this 3rd location in XTL-12	Field	No	Lindsay Corporation ran the first Tangent X-LITE test with 3 sets of shear bolts at this location. They did not disclose this change. This shows Lindsay Corporation was very aware they needed a 3rd set of shear bolts to allow the system to telescope further and to prevent spearing hazards. Lindsay Corporation later added 4th/ 5th 12.5' rails to the X-LITE system. They never provided the bolts for this connection but the X-LITE patent is clear this additional rail should have been

				<p>seamed with frangible shear bolts.</p> <p><u>LINDSAY CREATED THE PERCEPTION OF INCREASED CAPACITY WITHOUT ADDING ACTUAL INCREASED CAPACITY.</u></p>
	End	OF		50' X-LITE
	Examining the MGS X-LITE			<p>Lindsay Corporation began to market a 40' X-LITE MGS which was not approved by the FHWA. This was highly deceptive. The X-LITE is not a MGS system. The MGS uses mid-rail seams, a 12" blockout, and a 31" height. It is closely associated in the minds of end users as a MASH system. While not accurate the perception is that MASH/ MGS are the same.</p> <p>The X-LITE was never tested with MGS seams/ blockouts.</p> <p>The Lindsay Corporation marketed 3 different iterations of the MGS X-LITE. Those and the considerations of this system are included in this section.</p> <p><u>This is not an FHWA approved system. This is not a MASH system, This is not a MGS terminal.</u></p>
261	40' X-LITE MGS with 3' W-Beam "MGS" Rail	Field	No	<p>This is a 3' piece of W-Beam which Lindsay Corporation marketed to end users to create an "MGS" X-LITE. The X-LITE is not a MGS system and it cannot be an MGS System.</p> <p>This smaller panel was never crash tested and it is unknown how it will perform in the real world.</p>
262	15.5 W-Beam "MGS" rail	Field	No	<p>This is a 15.5' piece of W-Beam which Lindsay Corporation marketed to end users to create an "MGS" X-LITE. The X-LITE is not an MGS system and it cannot be an MGS System.</p>

				This panel was never crash tested and it is unknown how it will perform in the real world. This W-Beam does not telescope and will act as a rigid spear.
263	53 foot X-LITE MGS with 4 12.5' rails and a 3' W-BEAM "MGS" Rail	Field	No	<p>This is a 3' piece of W-Beam which Lindsay Corporation marketed to end users to create an "MGS" X-LITE after the 50' unapproved X-LITE. The X-LITE is not an MGS system and it cannot be an MGS System.</p> <p>This smaller panel was never crash tested and it is unknown how it will perform in the real world.</p>
	Rail 4 Height			
264	"MGS" X-LITE Height	Field	No	The Lindsay Corporation provided its fictional "MGS" X-LITE but did not instruct end users this version of the X-LITE could only be used in 31" installations. There is not a 27 5/8" mid rail splice system. This system has been installed at lower than 31".
	Rail 3/ 4 Connection on 40' 3' MGS X-LITE			
265-272	This mid-rail connection used Standard Splice Bolts	Field	No	This is an untested configuration near the 40' location and it is unknown how the X-LITE Slider Assembly will interact and function with this midrail seam.
	End	OF		50' X-LITE/ "MGS" X-LITES
	Examining			Lindsay Corporation initially marketed the 37.5' X-LITE as being able to be installed into concrete with only approved transitions. Later

	the X-LITE from 50'/53'-62.5'/ 65'			<p>versions of the X-LITE installation manuals included drawings which required progressively greater lengths of W-Beam beyond the 37.5' and then 50' and then the 53.5' "MGS" X-LITES.</p> <p>These were included in the drawings but not in the actual installation instructions and end users were never notified of the change. Today there are many X-LITES installed into concrete or more rigid barriers without sufficient W-Beam to comply with this addition to the X-LITE from Lindsay Corporation.</p> <p><u>This is not an FHWA approved system. These additional Lindsay required panels are not frangible and do not add capacity. They will pierce a vehicle.</u></p>
	Rail 5			<p>This is a Lindsay required rail but Lindsay does not provide it on all installs. Directions are not clear beyond 37.5'</p>
273	12.5' W-Beam Panel	XTL-4 XTL-9 XTL-10 XTL-12 XTL-14 Field	No	<p>The X-LITE was tested with a 12.5' W beam for the 5th panel. <u>Lindsay Corporation did not include it in the approved drawings sent to FHWA but sought approval for the X-LITE with just 3 W-Beam panels.</u></p> <p>Test 14 proved the X-LITE needed a 5th and 6th panel as the Slider panel slid midway down the sixth W-Beam panel. Lindsay in later editions stated there must be 12.5' of W-Beam downstream of it's 50'/53.5' 4 panel sytems</p>
274	3' W-Beam to Thrie Beam transition	Field	No	<p>Lindsay Corporation instructed end users they could install the 50' X-LITE into rigid barrier with only an approved transition. The X-LITE required 6 12.5' w-beam in test 14. This will cause an abrupt end to telescoping and will produce lethal outcomes.</p>
275	25' W-Beam rail	Field	No	<p>Lindsay Corporation later required the addition of at least 25' of W-Beam downstream past the 3' "MGS" X-LITE panel but did not include this with the X-LITE. This W-Beam does not telescope and will</p>

				act as a rigid spear.
276	Powder Coated 5th rail	Field	No	
277	FHWA Approved transitions	Field	No	The 37.5' X-LITE has been installed into more rigid FHWA approved transitions as a 4th rail. The X-LITE was never crash tested in this manner and given the greater number of posts and other factors this would likely produce lethal outcomes.
278	No rail	Field	No	<p>Despite knowing the X-LITE needed Six panels in Test 14 Lindsay Corporation did not instruct end users the run of rail for an X-LITE must have at least seven panels.</p> <p>This is necessary to get the 6 panels plus an additional panel to anchor the end.</p> <p>Sometimes this "No Rail" is a concrete wall! Lindsay instructed end users this is acceptable.</p>
279	12.5 Thrie Beam	Field	No	This piece has been seen in the field and there is no possible way for the Slider Assembly to telescope on this much taller rail.
	Post 9			This is a Lindsay required part but Lindsay does not provide it on all installs. Instructions not clear past 37.5' which leads to installations which have not been tested or approved.
280	Steel Post	XTL-4 XTL-9 XTL-10 XTL-12* XTL-14 Field	No	This Post is essential for the X-LITE to trigger but Lindsay Corporation did not include it in the original drawings submitted to FHWA.

281	Wood Post	Field	No	The X-LITE was tested with a steel post. Function at Post 7 is key to the system triggering properly. We simply do not know how the X-LITE will function under these circumstances.
282	Weak Post	Field	No	Not approved/ as tested.
283	Steel Thrie Beam Post	Field	No	This is a very dangerous rigid barrier but Lindsay
	Post 9 Blockout			This is a Lindsay required part but Lindsay does not provide it on all installs. Instructions not clear past 37.5' which leads to installations which have not been tested or approved.
284	8" Wood	Field	No	This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
285	8" Polymer	Field	No	This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
286	12" Polymer	Field	No	This is a significant untested change which could cause system to bind up and pierce vehicle.
287	Steel Blockout	Field	No	This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
288	No Blockout	Field	No	This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
289	Thrie Beam Blockout	Field		This is a much larger blockout and far more substantive.
	Post 9 Hardware			This is a Lindsay required part but Lindsay does not provide it on all installs. Instructions not clear past 37.5' which leads to installations

				which have not been tested or approved.
290	9" Bolt	Field	No	A smaller bolt than the 9 ½" bolt that was reported to FHWA was used.
291	9 ½" Bolt	XTL-4 XTL-9 XTL-10 XTL-12* XTL-14 Field	No	This was the bolt size used in Testing but Lindsay Corporation did not include a Post 9 Bolt even for its longer 53' 9 post systems.
292	9 ¾" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.
293	10" Bolt	Field	No	
294	~14" Bolt	Field	No	
295	2 bolts	Field	No	The Thrie beam mounts to the Post with 2 bolts further ensuring there will be no telescoping and outcomes will prove lethal
	Post 10			This is a Lindsay required part but Lindsay does not provide it on all installs. Instructions not clear past 37.5' which leads to installations which have not been tested or approved.
296	Steel Post	XTL-4 XTL-9 XTL-10 XTL-12* XTL-14 Field	No	This Post is essential for the X-LITE to trigger but Lindsay Corporation did not include it in the original drawings submitted to FHWA.
297	Wood Post	Field	No	The X-LITE was tested with a steel post. Function at Post 7 is key to the system triggering properly. We simply do not know how the X-LITE

				will function under these circumstances.
298	Weak Post	Field	No	This is another example of what can/ did happen once Lindsay Corporation gave up control of this critical part.
299	Steel Thrie Beam Post	Field	No	This is a very dangerous rigid barrier but Lindsay
	Post 10 Blockout			This is a Lindsay required part but Lindsay does not provide it on all installs. Instructions not clear past 37.5' which leads to installations which have not been tested or approved.
300	8" Wood	Field	No	This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
301	8" Polymer	Field	No	This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
302	12" Polymer	Field	No	This is a significant untested change which could cause system to bind up and pierce vehicle.
303	Steel Blockout	Field	No	This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
304	No Blockout	Field	No	This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
305	Thrie Beam Blockout	Field		This is a much larger blockout and far more substantive.
	Post 10 Hardware			This is a Lindsay required part but Lindsay does not provide it on all installs. Instructions not clear past 37.5' which leads to installations which have not been tested or approved.
306	9" Bolt	Field	No	A smaller bolt than the 9 ½" bolt that was reported to FHWA was

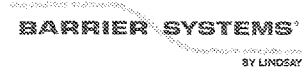
				used.
307	9 ½" Bolt	XTL-4 XTL-9 XTL-10 XTL-12* XTL-14 Field	No	This was the bolt size used in Testing but Lindsay Corporation did not include a Post 9 Bolt even for its longer 53' 9 post systems.
308	9 ¾" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.
309	10" Bolt	Field	No	
310	~14" Bolt	Field	No	
311	2 bolts	Field	No	The Thrie beam mounts to the Post with 2 bolts further ensuring there will be no telescoping and outcomes will prove lethal
	Rail 6			This is a Lindsay required part but Lindsay does not provide it on all installs. Instructions not clear past 37.5' which leads to installations which have not been tested or approved. This would go beyond the 53 foot "MGS" X-LITE
312	12.5' W-Beam guardrail	Field		This was added in the final version of the X-LITE installation manuals
	Post 11			
313	Steel Post	XTL-4 XTL-9 XTL-10 XTL-12* XTL-14 Field	No	This Post is essential for the X-LITE to trigger but Lindsay Corporation did not include it in the original drawings submitted to FHWA.

314	Wood Post	Field	No	The X-LITE was tested with a steel post. Function at Post 7 is key to the system triggering properly. We simply do not know how the X-LITE will function under these circumstances.
315	Weak Post	Field	No	Not as tested
316	Steel Thrie Beam Post	Field	No	This is a very dangerous rigid barrier but Lindsay
	Post 11 Blockout			This is a Lindsay required part but Lindsay does not provide it on all installs. Instructions not clear past 37.5' which leads to installations which have not been tested or approved.
317	8" Wood	Field	No	This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
318	8" Polymer	Field	No	This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
319	12" Polymer	Field	No	This is a significant untested change which could cause system to bind up and pierce vehicle.
320	Steel Blockout	Field	No	This blockout functions differently than the polymer blockouts with which the Tangent X-LITE was tested.
321	No Blockout	Field	No	This blockout functions differently than the wood blockouts with which the Flared X-LITE was tested.
322	Thrie Beam Blockout	Field		This is a much larger blockout and far more substantive.
	Post 11 Hardware			This is a Lindsay required part but Lindsay does not provide it on all installs. Instructions not clear past 37.5' which leads to installations which have not been tested or approved.

323	9" Bolt	Field	No	A smaller bolt than the 9 ½" bolt that was reported to FHWA was used.
324	9 ½" Bolt	XTL-4 XTL-9 XTL-10 XTL-12* XTL-14 Field	No	This was the bolt size used in Testing but Lindsay Corporation did not include a Post 9 Bolt even for its longer 53' 9 post systems.
325	9 ¾" Bolt	Field	No	A larger bolt than the 9 ½" that was reported to FHWA was used.
326	10" Bolt	Field	No	
327	~14" Bolt	Field	No	
328	2 bolts	Field	No	The Thrie beam mounts to the Post with 2 bolts further ensuring there will be no telescoping and outcomes will prove lethal.
	End of			<p>Lindsay Mandated 62.5'/ 65' X-LITE</p> <p>The problem is that in test 5 the X-LITE remained engaged with the W-Beam through the middle of rail 6. This proves the X-LITE system should have been a minimum of 75' before any transitions to anything beyond W-Beam or Steel posts with Polymer blockouts.</p> <p>What this means is that there are dozens of additional deviations of the X-LITE system from what was tested. Any of these would cause the X-LITE to stop telescoping and cause a rollover, piercing, or sudden force stop which can cause severe internal injuries/ spinal fractures.</p> <p>The Lindsay Corporation made secret mandates and changes but these as seen above were not adequate and as shown here</p>

				were incomplete and insufficient.
	Additional Changes			Extemporaneous Installation Instructions
329	Shear Bolt Guidance to TXDOT		No	The Lindsay Corporation according to TXDOT refused to update its installation manuals because of FHWA guidance related to MASH implementation but was providing extemporaneous installation instructions to install the shear bolts “the looser the better.”
330	Shear Bolt Guidance to NJDOT		No	The Lindsay Corporation instructed NJDOT to install the shear bolts hand tight and then tighten ¼ turn with a wrench.
331	Shear Bolt Guidance to Tennessee DOT		No	The Lindsay Corporation reported to Tennessee DOT they ran secret tests on the X-LITE shear bolts which showed the bolt could not be torqued despite TDOT discovering they could in fact be torqued.

EXHIBIT B



ENGINEERING CHANGE NOTICE FORM

Request Date: 8/5/2013 Originator: Alvaro E. Morales	Type of Change: <input type="checkbox"/> New Release <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Clerical <input type="checkbox"/> Prototype	ECN # 2102
Models Affected: X-LITE		
Problem/Description: (Explain clearly the current situation that requires change. Do not use "too" i.e. too short, too long, without qualifying resulting condition). The X-Lite's Slider Panel, Front (BSI-1012093-00) & Back (BSI-1012096-00) combination have been incorrectly installed if the installation instructions are not followed according to the manual. A "notch" and a "triangle" have been added to both parts to correctly identify the orientation of both components at final assembly, the chamfered end of both components are to be installed facing towards the impact head, the triangle forms a reference "arrow" shape that also points towards the head of the system. Manufacturing requested to modify the slider panel drawing (BSI-1012092-00) so that it is fabricated using two items as it's currently being made by the vendor. The BSI-1012092-00 Panel will not have the bent portion at the 6 degrees that it's currently specified, a new short piece, BSI-1308019-00 "Short Guardrail Panel, X-Lite" will be welded inplace. The "Black" welded drawing (BSI-1303040-00) will have the new short panel added to the drawing.		
Approvals	Date	Notes
Released By:	8-13-13	
Engineering:	8/12/13	

Remaining signatures of approval by other functional areas are found in Navision ECN workflow

AFFECTED ITEMS

Current Dwg: BSI-1012093-00	Rev: A	New Dwg: BSI-1012093-00	Rev: B	Description: Slider Panel, Front, X-Lite
Description of Changes: Drawing updated to show added "triangle" and "notch" to lower level components.				
Current Dwg: BSI-1303040-00	Rev: A	New Dwg: BSI-1303040-00	Rev: B	Description: Slider Panel, Front, X-Lite, Black
Description of Changes: Drawing updated to show added "triangle" and "notch" to lower level components. Added new Item BSI-1308002-00, Item 1 (BSI-1012091-00) change qty. from 2 to 1.				
Current Dwg: BSI-1012091-00	Rev: B	New Dwg: BSI-1012091-00	Rev: C	Description: Angle, Slider
Description of Changes: Added traingle and chamfer to part, changed radius dimension from 2X R3/4" to R3/4"				
Current Dwg:	Rev:	New Dwg: BSI-1308002-00	Rev: A	Description: Angle, Slider

6/26/13



Description of Changes: New item.				
Current Dwg: BSI-1012096-00	Rev: A	New Dwg: BSI-1012096-00	Rev: B	Description: Back Slider Panel, X-Lite, Galv
Description of Changes: Drawing updated to show added "triangle" to lower level component.				
Current Dwg: BSI-1305015-00	Rev: A	New Dwg: BSI-1305015-00	Rev: B	Description: Back Slider Panel, X-Lite, Black
Description of Changes: Drawing updated to show added "triangle" to item 1 (BSI-1012095-00)				
Current Dwg: BSI-1012095-00	Rev: B	New Dwg: BSI-1012095-00	Rev: C	Description: Slider Back Plate
Description of Changes: Added "triangle" detail to part.				
Current Dwg: BSI-1012090-00	Rev: B	New Dwg: BSI-1012090-00	Rev: C	Description: Panel, Slider, X-Lite
Description of Changes: modify the drawing to remove the bend portion of the part.				
Current Dwg:	Rev:	New Dwg: BSI-1308019-00	Rev: A	Description: Short Guardrail Panel, X-Lite
Description of Changes: New drawing, piece replaces the short bent portion that is being removed from the BSI-1012090-00				
Current Dwg:	Rev:	New Dwg:	Rev:	Description:
Description of Changes:				

6/26/13



ENGINEERING CHANGE NOTICE FORM

Request Date: 8/5/2013 Originator: Alvaro E. Morales	Type of Change: <input type="checkbox"/> New Release <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Clerical <input type="checkbox"/> Prototype	ECN # 2102
Models Affected: X-LITE		
Problem/Description: (Explain clearly the current situation that requires change. Do not use "too" i.e. too short, too long, without qualifying resulting condition). The X-Lite's Slider Panel, Front (BSI-1012093-00) & Back (BSI-1012096-00) combination have been incorrectly installed if the installation instructions are not followed according to the manual. A "notch" and a "triangle" have been added to both parts to correctly identify the orientation of both components at final assembly, the chamfered end of both components are to be installed facing towards the impact head, the triangle forms a reference "arrow" shape that also points towards the head of the system.		
Approvals	Date	Notes
Released By:	8/5/13	
Engineering:	8/5/2013	

Remaining signatures of approval by other functional areas are found in Navision ECN workflow

AFFECTED ITEMS

Current Dwg: BSI-1012093-00	Rev: A	New Dwg: BSI-1012093-00	Rev: B	Description: Slider Panel, Front, X-Lite
Description of Changes: Drawing updated to show added "triangle" and "notch" to lower level components.				
Current Dwg: BSI-1303040-00	Rev: A	New Dwg: BSI-1303040-00	Rev: B	Description: Slider Panel, Front, X-Lite, Black
Description of Changes: Drawing updated to show added "triangle" and "notch" to lower level components. Added new Item BSI-1308002-00, Item 1 (BSI-1012091-00) change qty. from 2 to 1.				
Current Dwg: BSI-1012091-00	Rev: B	New Dwg: BSI-1012091-00	Rev: C	Description: Angle, Slider
Description of Changes: Added triangle and chamfer to part, changed radius dimension from 2X R3/4" to R3/4"				
Current Dwg:	Rev:	New Dwg: BSI-1308002-00	Rev: A	Description: Angle, Slider
Description of Changes: New item.				

6/26/13



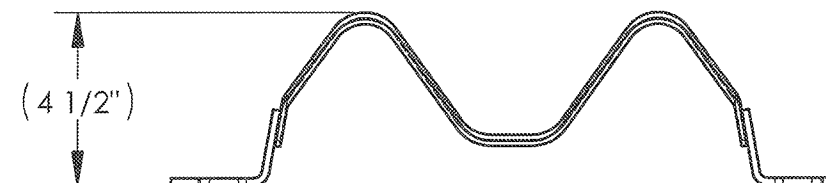
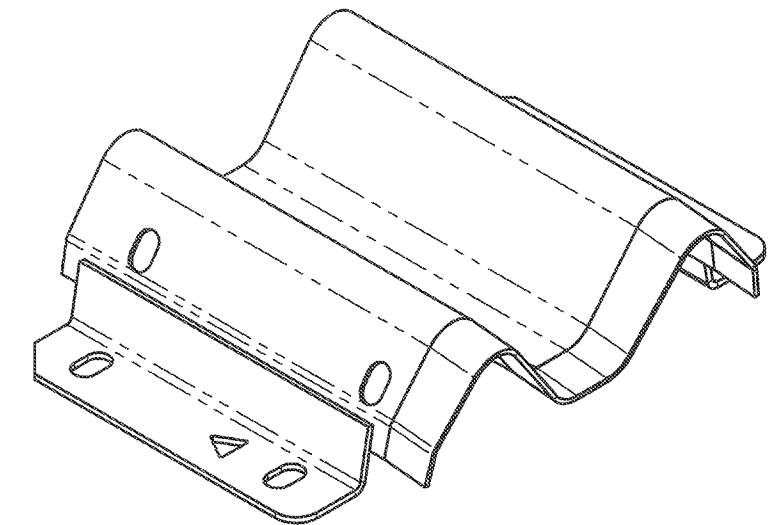
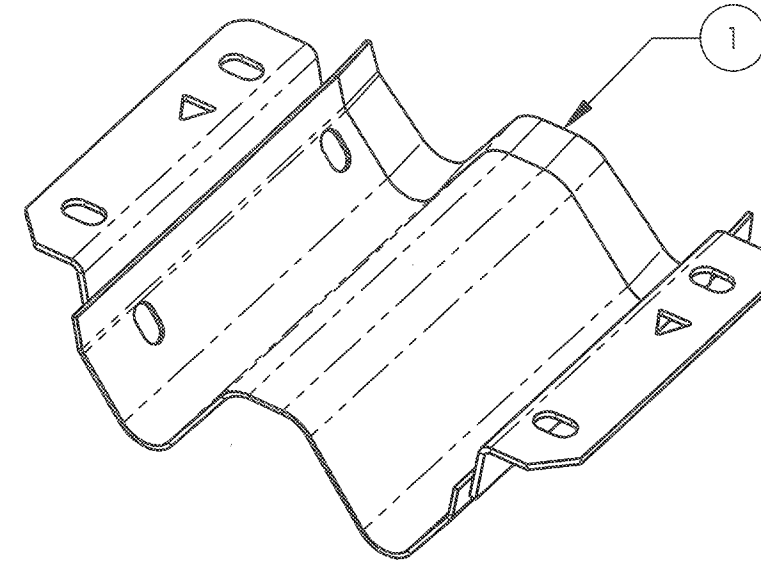
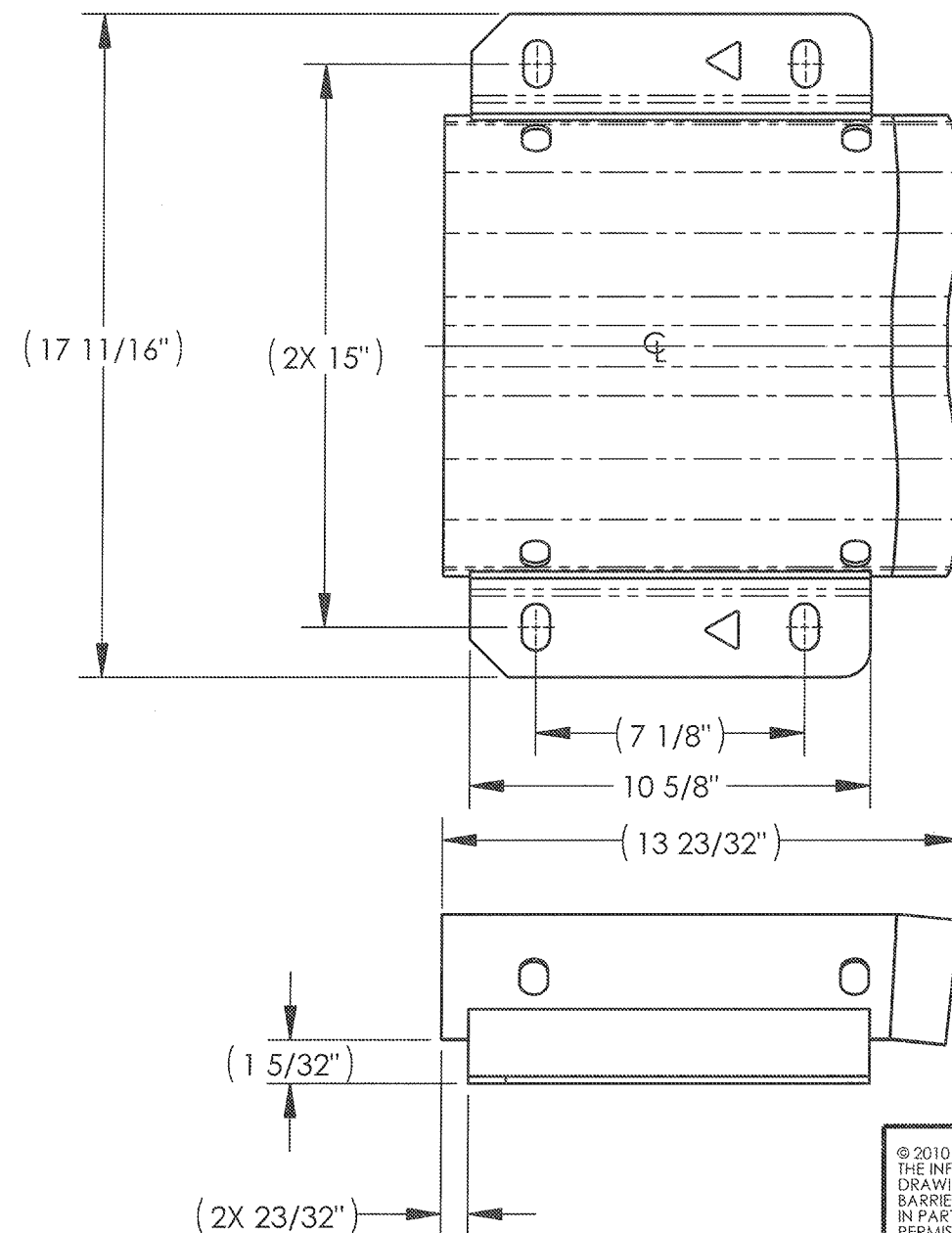
Current Dwg: BSI-1012096-00	Rev: A	New Dwg: BSI-1012096-00	Rev: B	Description: Back Slider Panel, X-Lite, Galv
Description of Changes: Drawing updated to show added "triangle" to lower level component.				
Current Dwg: BSI-1305015-00	Rev: A	New Dwg: BSI-1305015-00	Rev: B	Description: Back Slider Panel, X-Lite, Black
Description of Changes: Drawing updated to show added "triangle" to item 1 (BSI-1012095-00)				
Current Dwg: BSI-1012095-00	Rev: B	New Dwg: BSI-1012095-00	Rev: C	Description: Slider Back Plate
Description of Changes: Added "triangle" detail to part.				
Current Dwg:	Rev:	New Dwg:	Rev:	Description:
Description of Changes:				
Current Dwg:	Rev:	New Dwg:	Rev:	Description:
Description of Changes:				
Current Dwg:	Rev:	New Dwg:	Rev:	Description:
Description of Changes:				


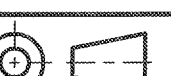
6/26/13

Item	No.	Description	QTY	UOM
1	BSI-1303040-00	Slider Panel, Front, X-Lite, Blk	1	EA

NOTES: UNLESS OTHERWISE SPECIFIED.

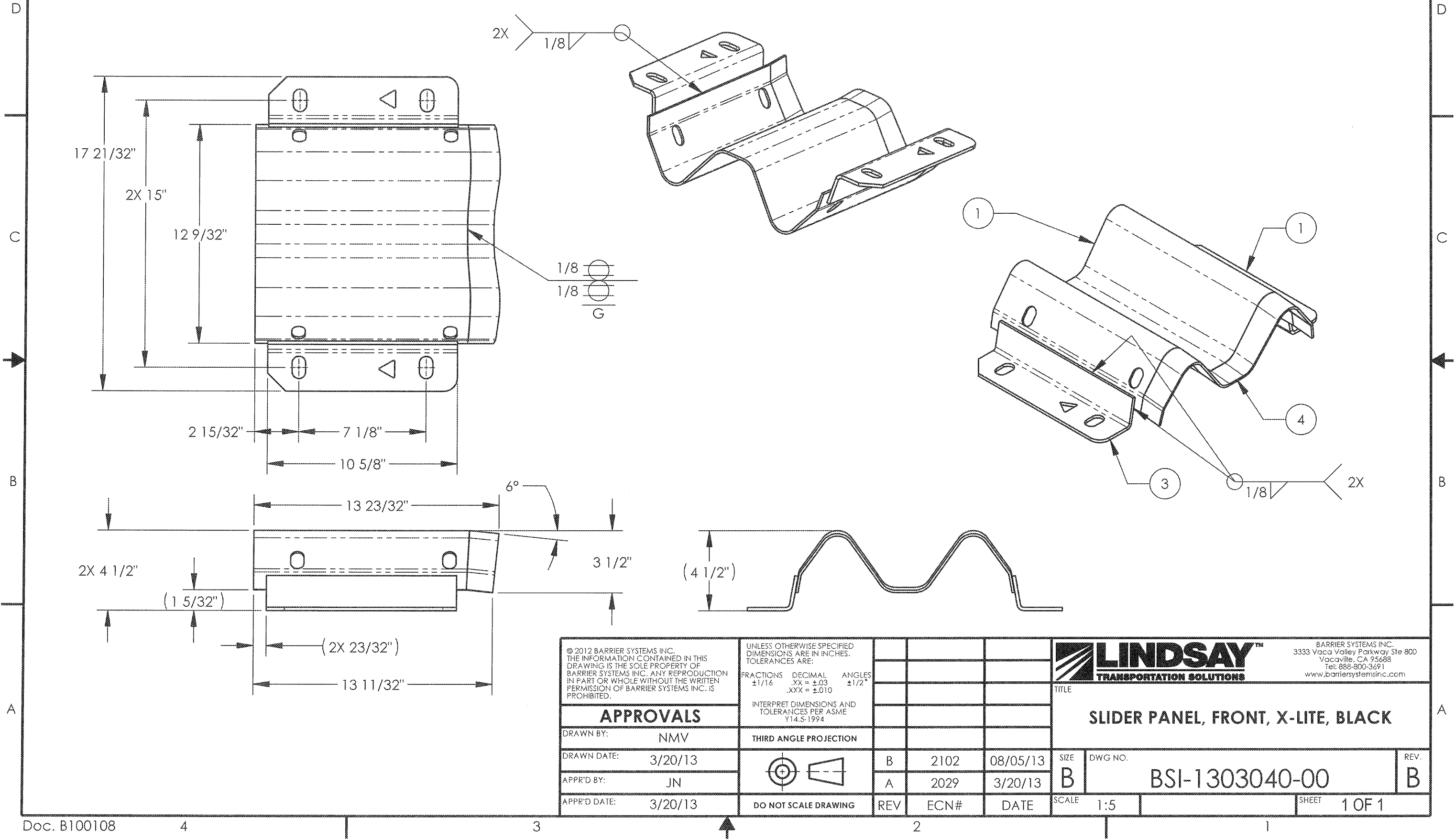
1. BREAK SHARP EDGES, DEBURR.
2. HOLES TO BE FREE OF WELD SPLATTER.
3. FINISH TO BE HOT DIPPED GALVANIZED PER ASTM A123.





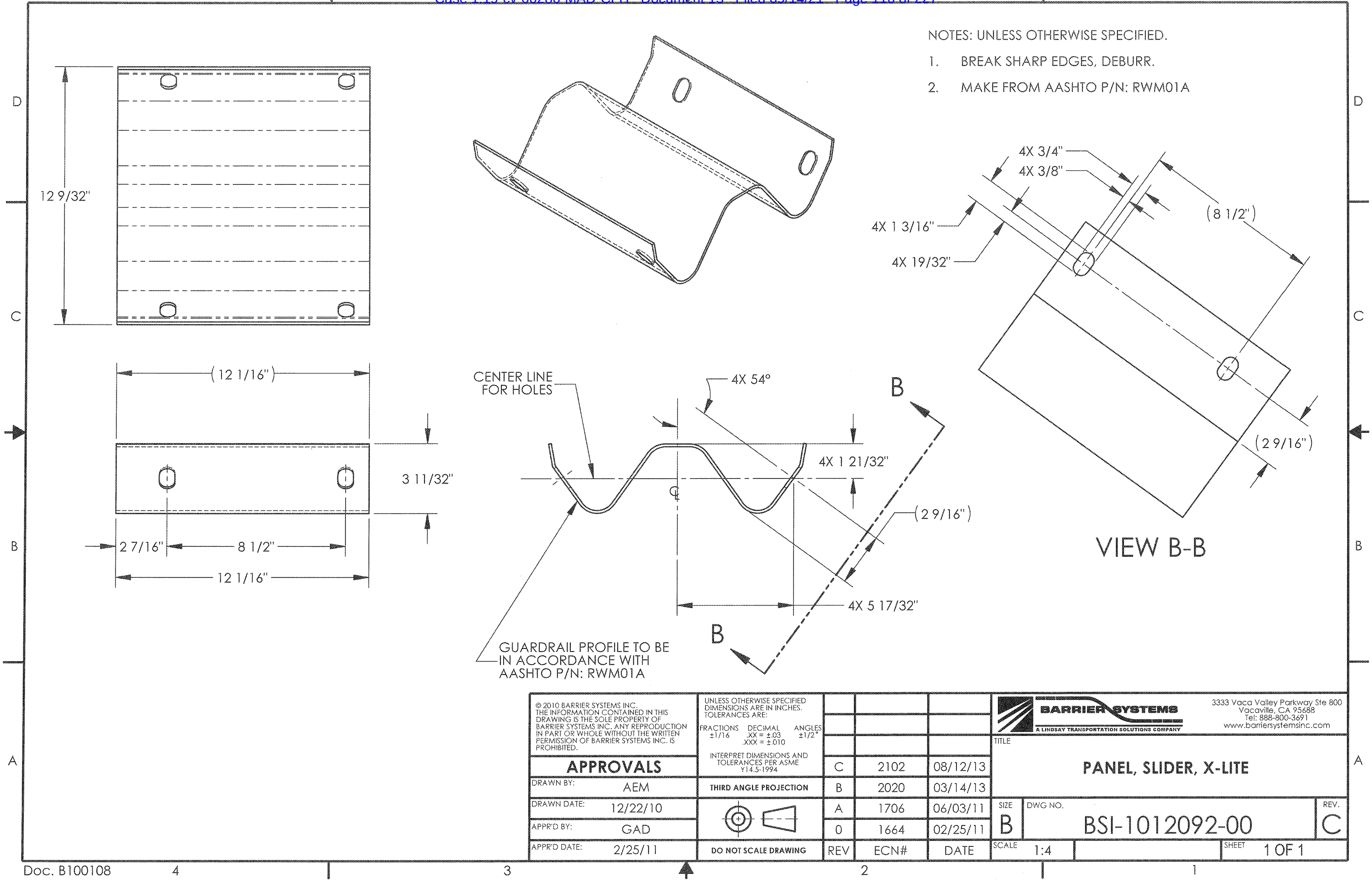
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				FRACTIONS	DECIMAL	ANGLES												
				±1/16	.XX = ±.03	±1/2°												
					.XXX = ±.010													
TITLE																		
SLIDER PANEL, FRONT, X-LITE																		
DRAWN BY: AEM		THIRD ANGLE PROJECTION		B	2102	08/05/13	SIZE DWG. NO.		REV.									
DRAWN DATE: 12/22/2010				A	2029	3/20/13	B BSI-1012093-00		B									
APPR'D BY: GAD				O	1664	02/25/11												
APPR'D DATE: 02/25/11		DO NOT SCALE DRAWING		REV	ECN#	DATE	SCALE	1:5	SHEET	1 OF 1								

NOTES: UNLESS OTHERWISE SPECIFIED.
1. BREAK SHARP EDGES, DEBURR.
2. HOLES TO BE FREE OF WELD SPLATTER.

Item	No.	Description	QTY	UOM
1	BSI-1012091-00	Angle, Slider, X-Lite	1	EA
2	BSI-1012092-00	Panel, Slider, X-Lite	1	EA
3	BSI-1308002-00	Angle, Slider, X-Lite	1	EA
4	BSI-1308019-00	Short Guardrail Panel, X-Lite	1	EA

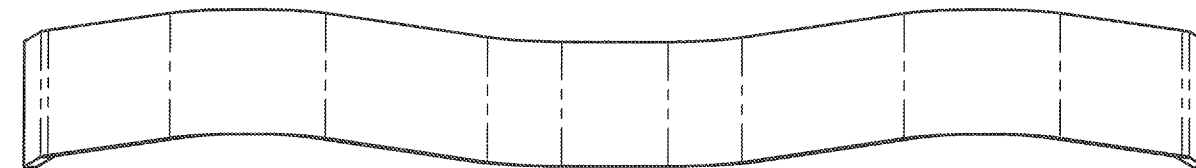


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DRAWN BY: NMV		THIRD ANGLE PROJECTION								SIZE		DWG NO.		REV.	
DRAWN DATE: 3/20/13				B 2102 08/05/13		B		BSI-1303040-00		B					
APPR'D BY: JN				A 2029 3/20/13											
APPR'D DATE: 3/20/13		DO NOT SCALE DRAWING		REV		ECN#		DATE		SCALE 1:5		SHEET 1 OF 1			

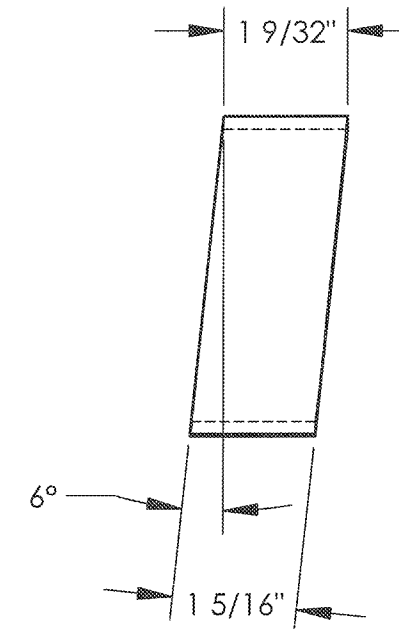
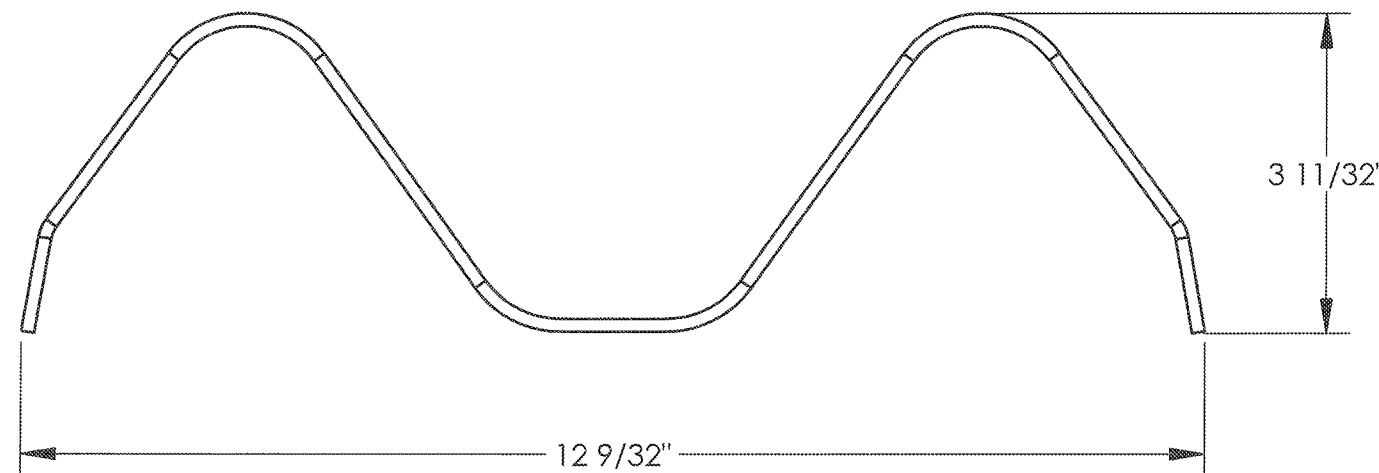
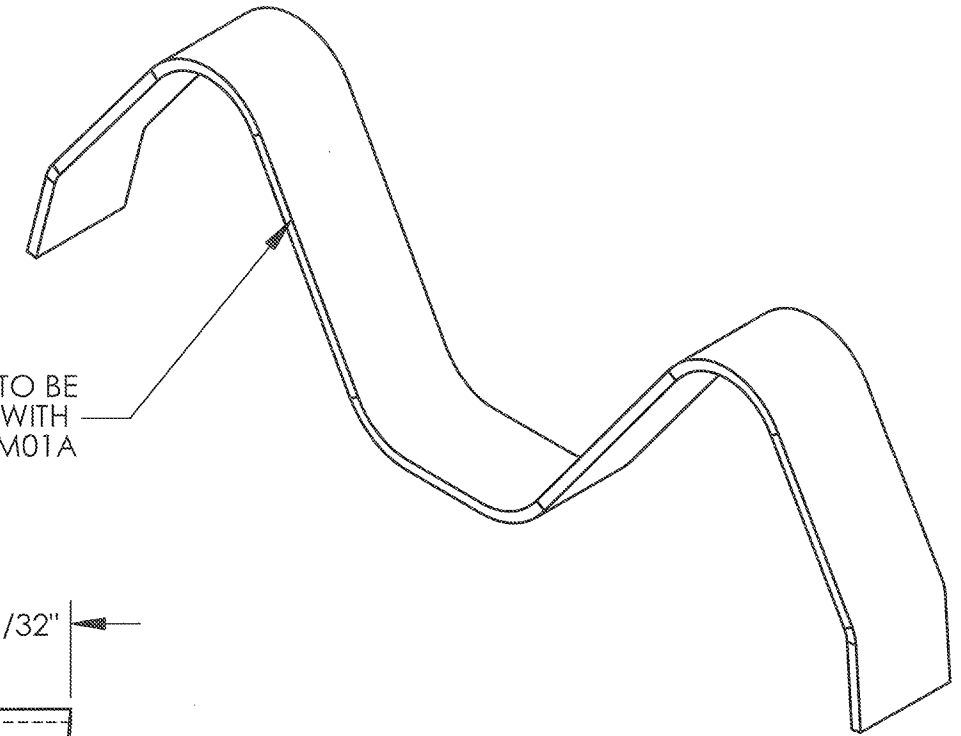


NOTES: UNLESS OTHERWISE SPECIFIED.

1. BREAK SHARP EDGES, DEBURR.
2. MAKE FROM AASHTO P/N: RWM01A



GUARDRAIL PROFILE TO BE
IN ACCORDANCE WITH
AASHTO P/N: RWM01A

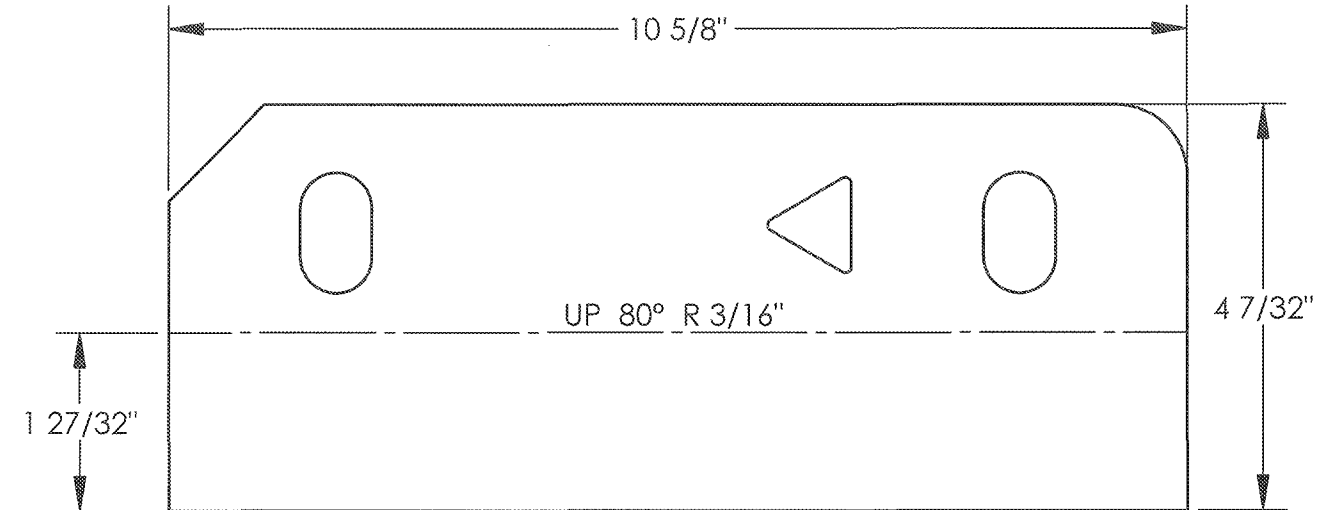
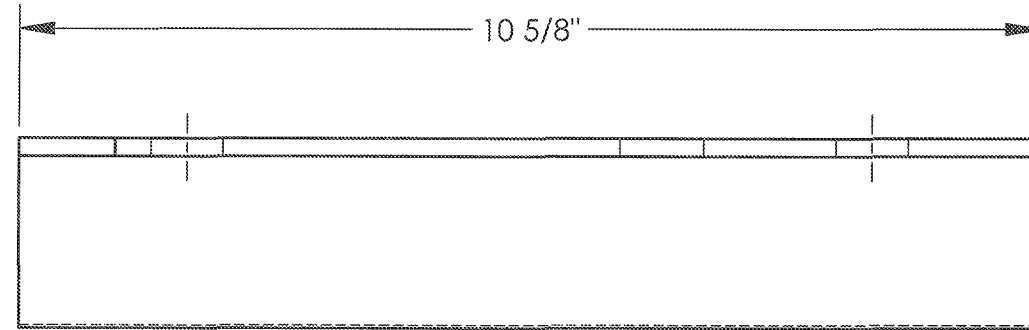


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APPROVALS		<small>INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-1994</small>				SHORT GUARDRAIL PANEL, X-LITE	
DRAWN BY: AEM		THIRD ANGLE PROJECTION				TITLE	
DRAWN DATE: 08/12/13						SIZE DWG NO.	
APPR'D BY: GAD				A 2102 08/12/13		B BSI-1308019-00	
APPR'D DATE: 08/12/13		DO NOT SCALE DRAWING		REV ECN# DATE		SCALE 1:2	
						SHEET 1 OF 1	

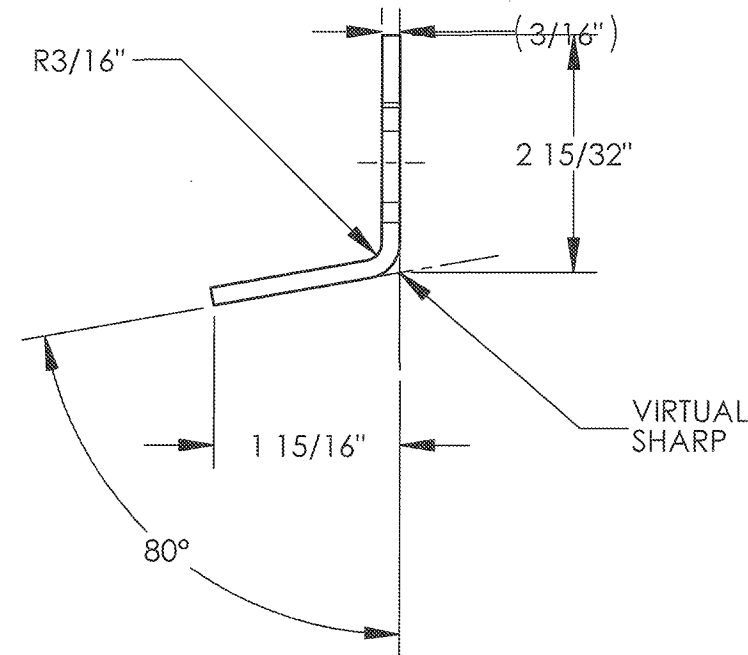
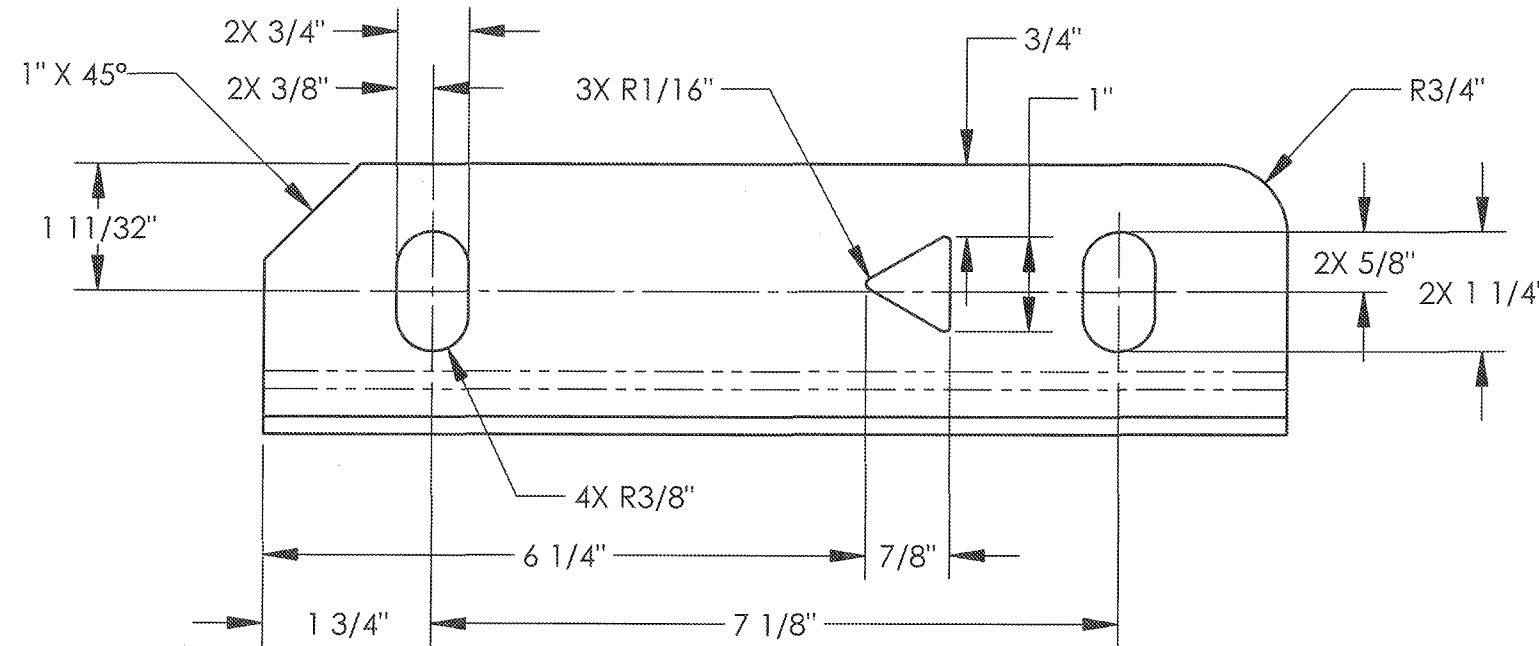
NOTES: UNLESS OTHERWISE SPECIFIED.

1. BREAK SHARP EDGES, DEBURR.

ITEM	PART NUMBER	DESCRIPTION	QTY.	UOM
1	6001178/1057827	Plt 3/16 (7 ga) Hr A36	0.30	SQF



FLAT PATTERN FOR REFERENCE

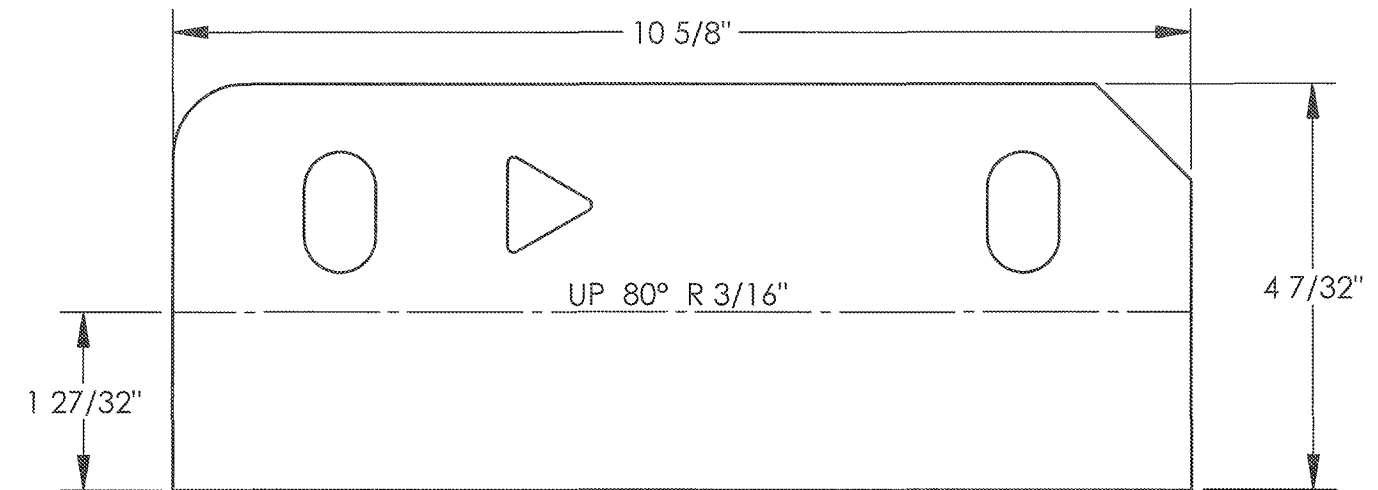
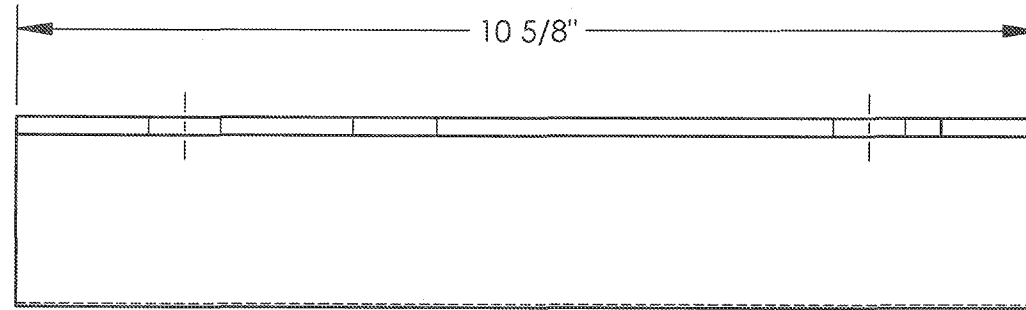


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APPROVALS		THIRD ANGLE PROJECTION		C 2102 08/05/13		ANGLE, SLIDER	
DRAWN BY: AEM		DRAWN DATE: 12/22/10		B 2082 5/31/13		SIZE DWG NO. BSI-1012091-00	
APPR'D BY: GAD		APPR'D DATE: 02/25/11		A 2018 3/12/13		REV. C	
DO NOT SCALE DRAWING		REV ECN# DATE		SCALE 1:2		SHEET 1 OF 1	

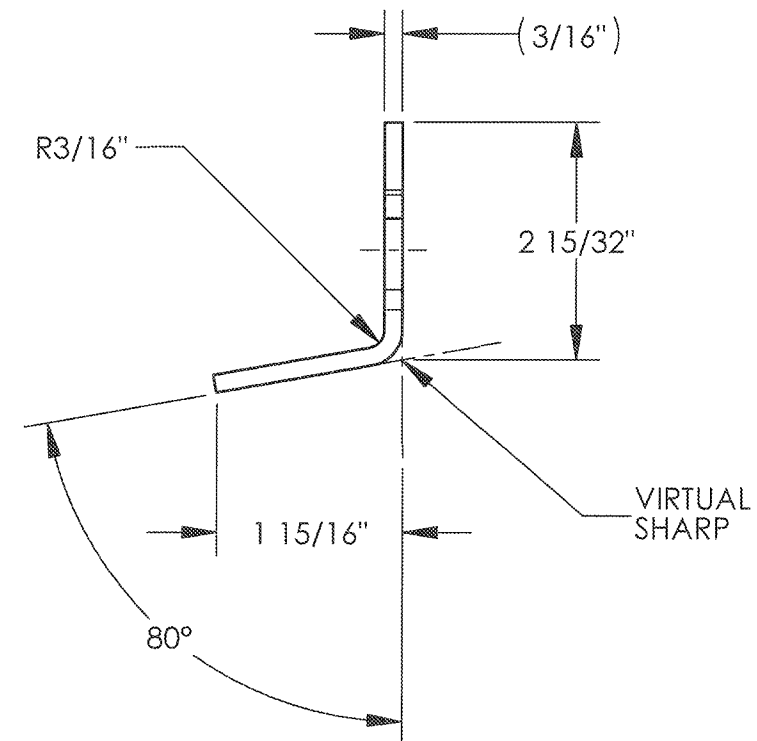
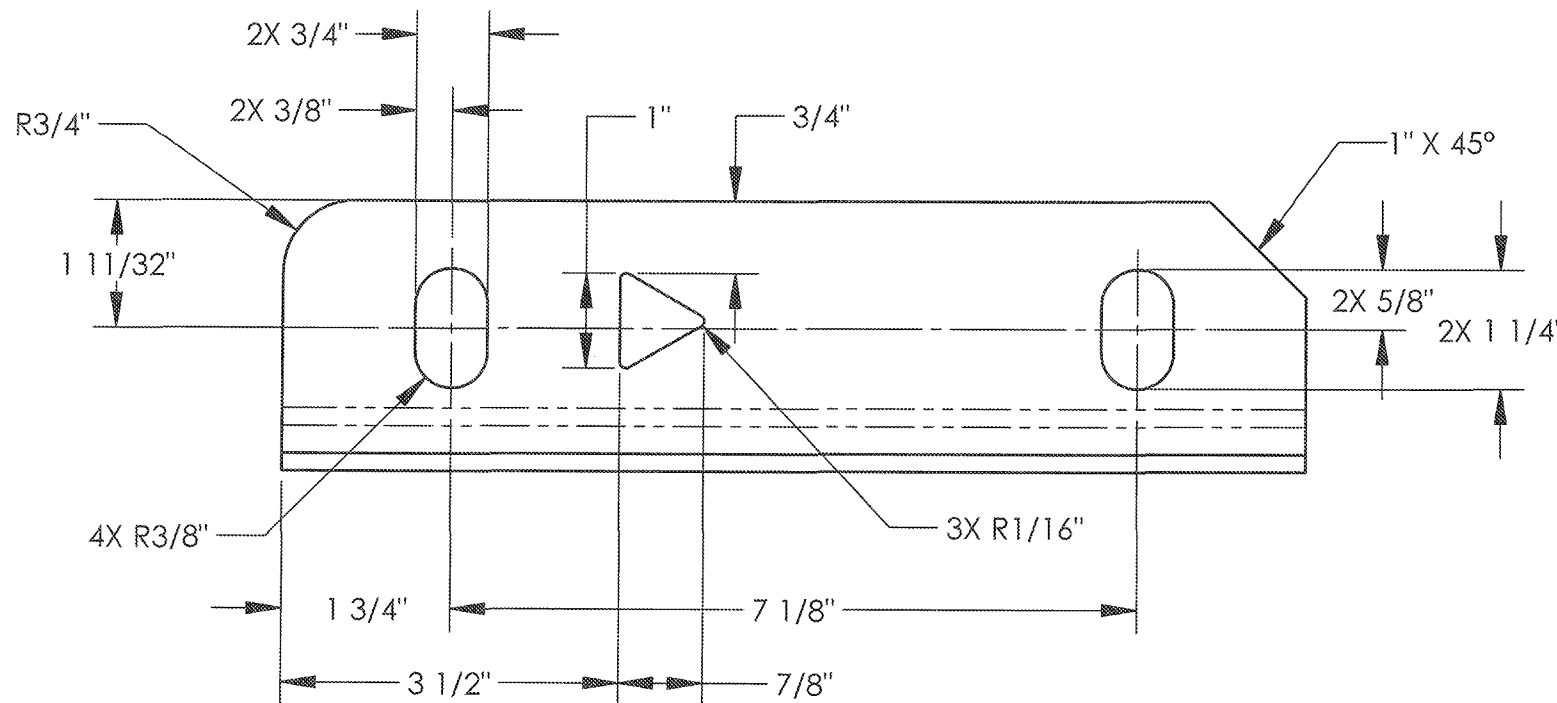
NOTES: UNLESS OTHERWISE SPECIFIED.

1. BREAK SHARP EDGES, DEBURR.

ITEM	PART NUMBER	DESCRIPTION	QTY.	UOM
1	6001178/1057827	Plt 3/16 (7 ga) Hr A36	0.30	SQF



FLAT PATTERN FOR REFERENCE

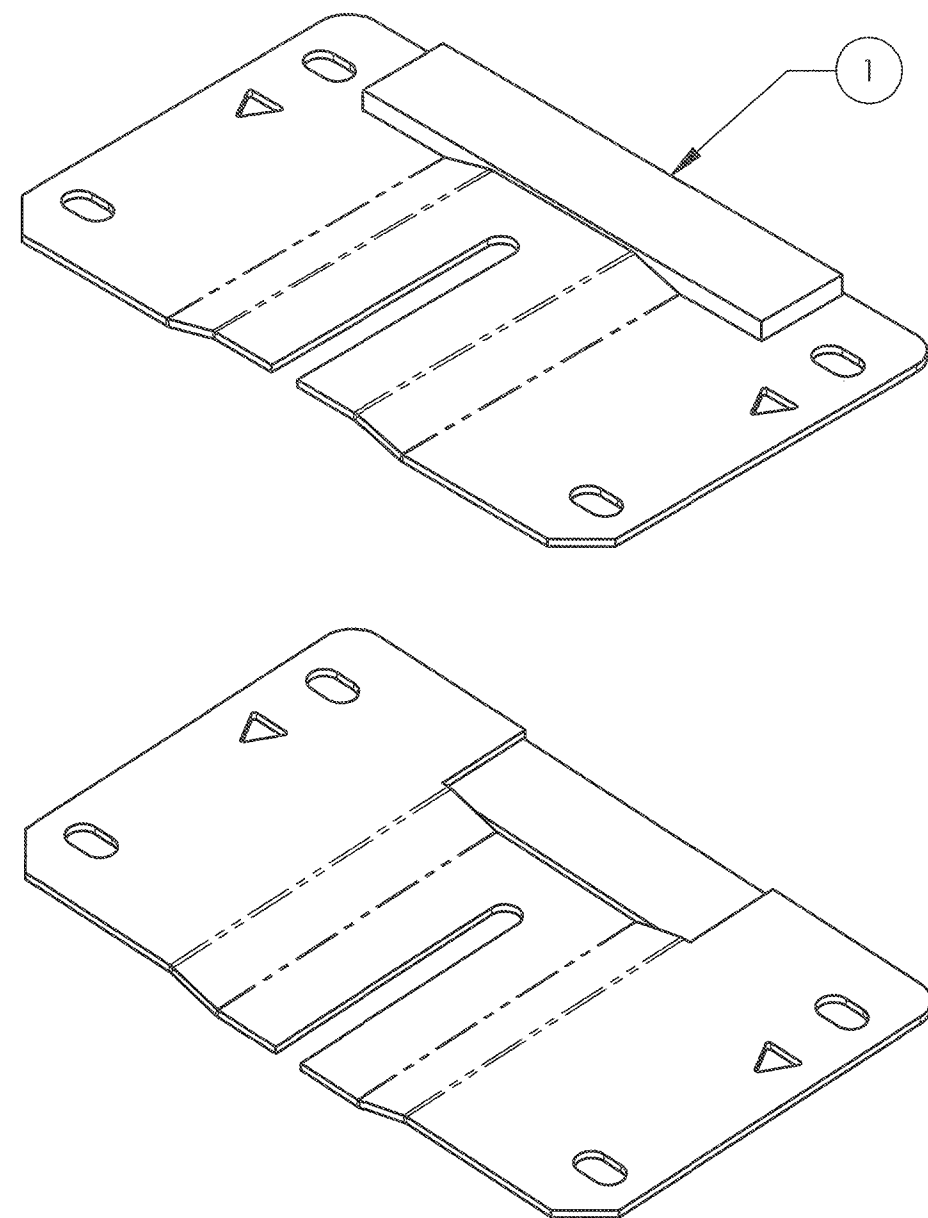
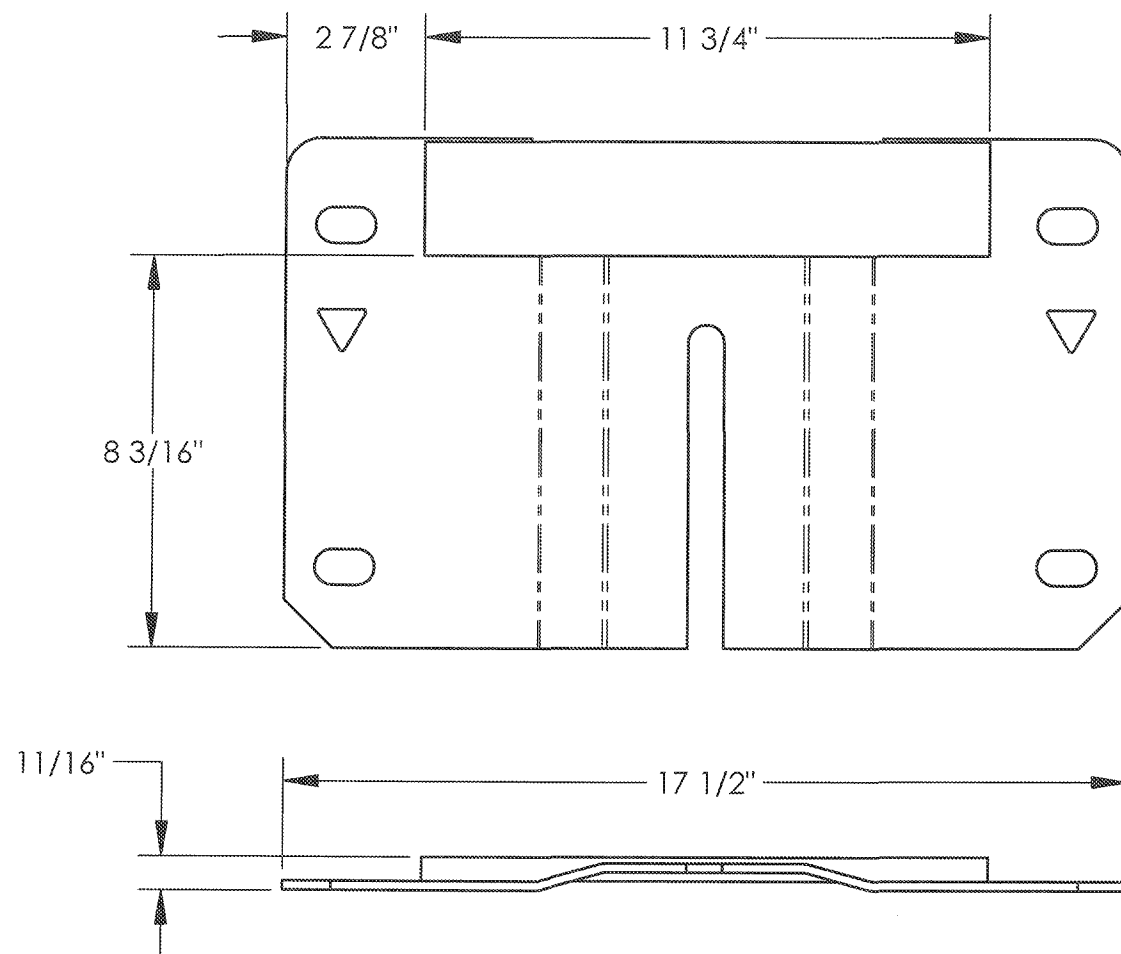


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<p>APPROVALS</p>		<p>THIRD ANGLE PROJECTION</p>		<p>ANGLE, SLIDER, X-LITE</p>	
<p>DRAWN BY: AEM</p>		<p>DRAWN DATE: 08/05/13</p>		<p>SIZE: B DWG NO. BSI-1308002-00</p>	
<p>APPR'D BY: GAD</p>		<p>APPR'D DATE: 08/05/13</p>		<p>REV. A</p>	
<p>DO NOT SCALE DRAWING</p>		REV	ECN#	DATE	SCALE 1:2
					SHEET 1 OF 1

ITEM	PART NUMBER	DESCRIPTION	QTY	UOM
1	BSI-1305015-00	BACK SLIDER PANEL,X-LITE,BLACK	1	EACH

NOTES: UNLESS OTHERWISE SPECIFIED.

1. BREAK SHARP EDGES, DEBURR.
2. HOLES TO BE FREE OF WELD SPLATTER.
3. FINISH TO BE HOT DIPPED GALVANIZED PER ASTM A123.

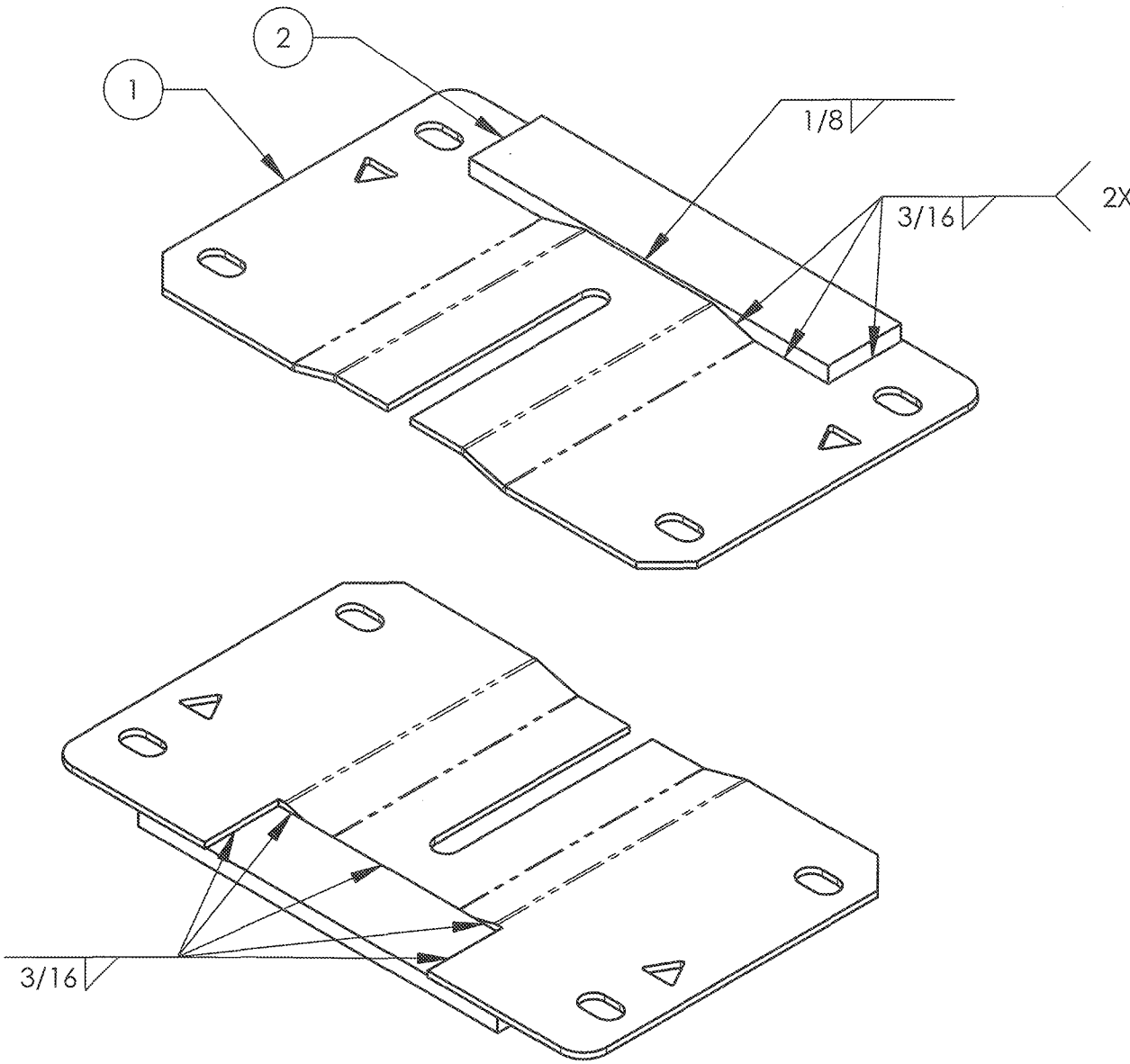
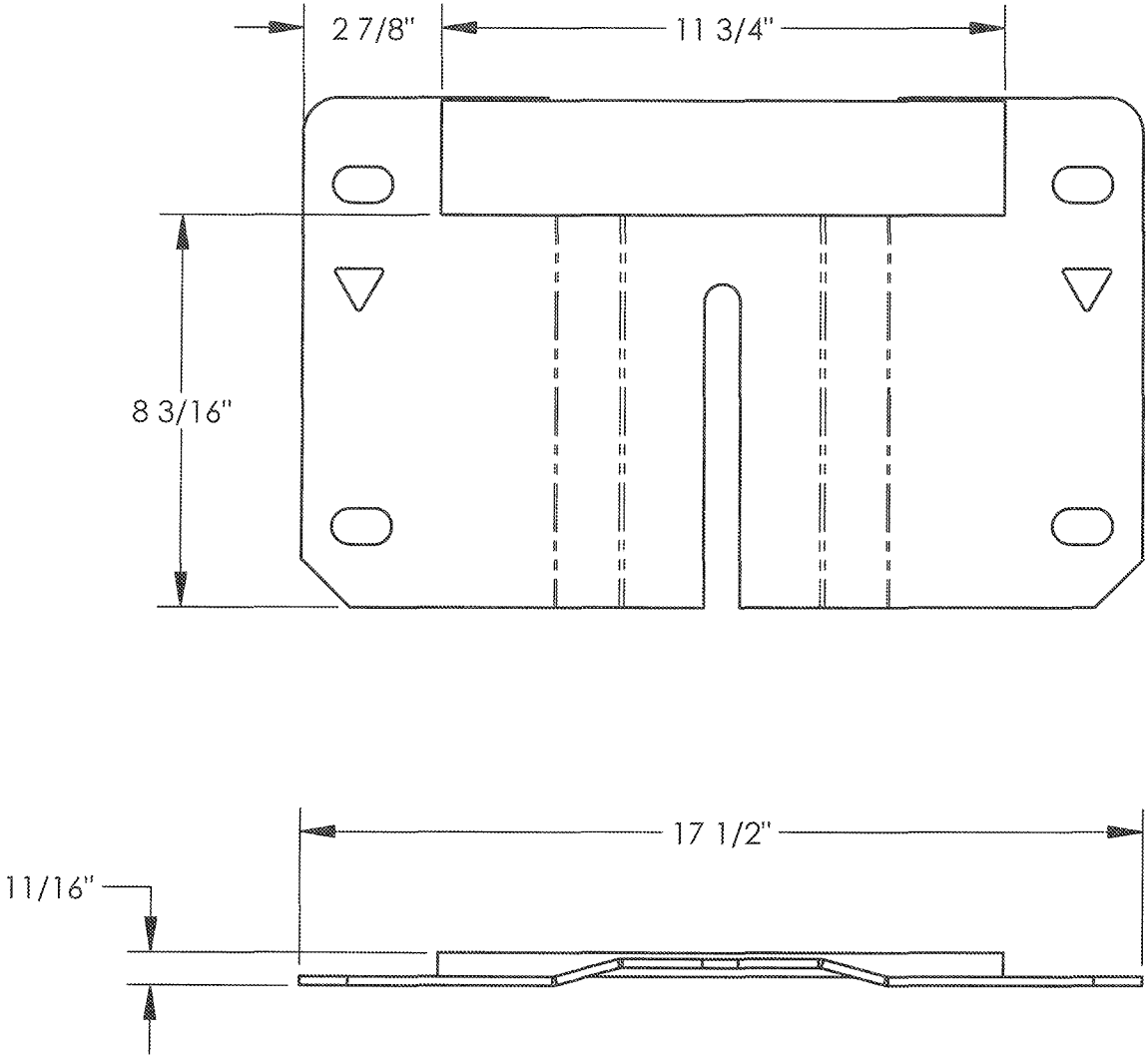




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APPROVALS		THIRD ANGLE PROJECTION		B		2102		08/05/13	
DRAWN BY: AEM		INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-1994		A		2066		5/9/13	
DRAWN DATE: 12/22/10		DO NOT SCALE DRAWING		0		1664		02/25/11	
APPR'D BY: GAD		REV		ECN#		DATE		SCALE	
APPR'D DATE: 2/25/11								1:4	
								SHEET	
								1 OF 1	

TITLE		BACK SLIDER PANEL,X-LITE,GALV	
SIZE	DWG NO.	REV.	
B	BSI-1012096-00	B	

Item	No.	Description	QTY	UOM
1	BSI-1012095-00	Slider Back Plate	1	EA
2	BSI-1012094-00	Bar, Post Smasher	1	EA

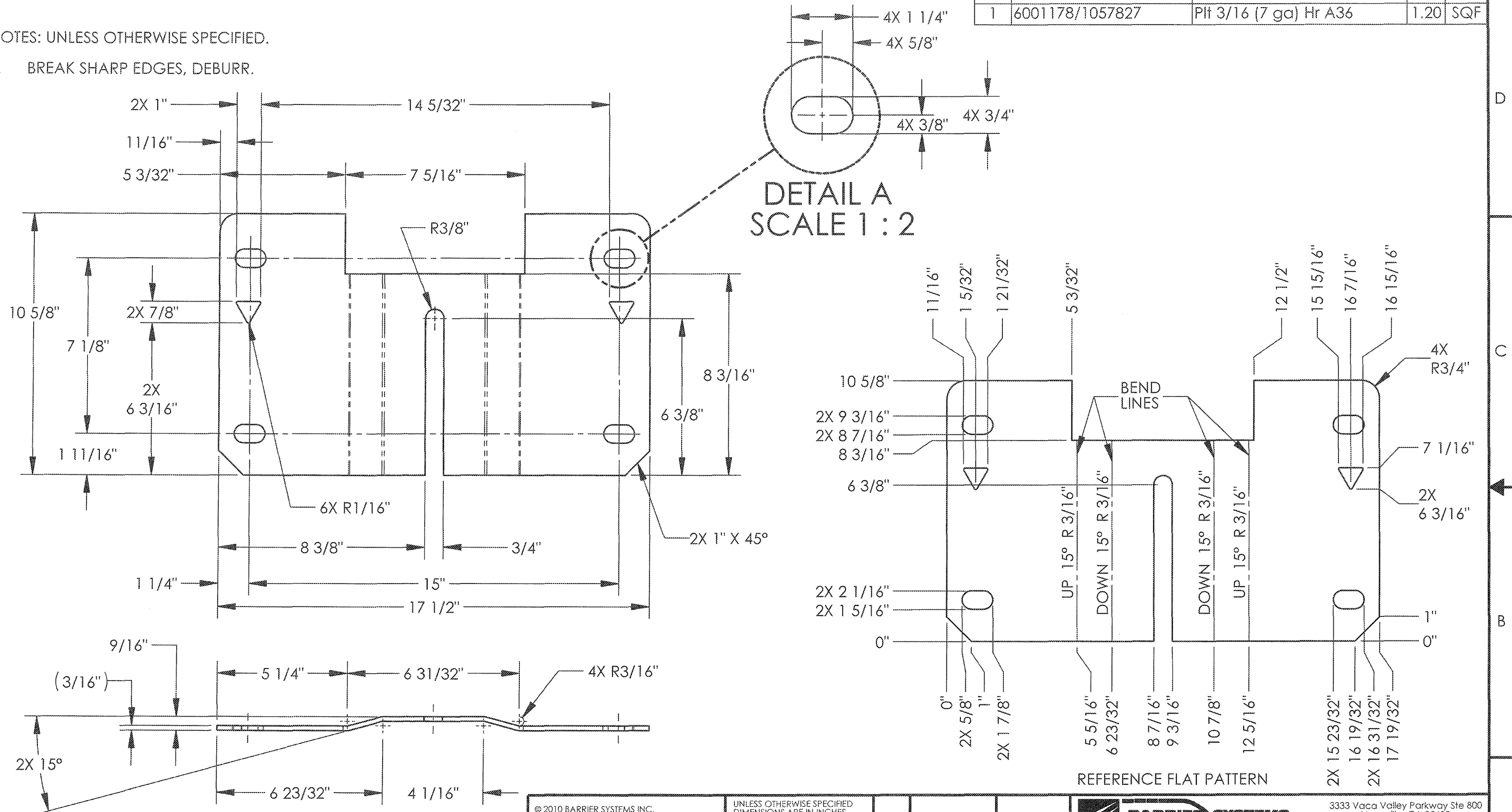
NOTES: UNLESS OTHERWISE SPECIFIED.
1. BREAK SHARP EDGES, DEBURR.
2. HOLES TO BE FREE OF WELD SPLATTER.



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	FRACTIONS DECIMAL ANGLES ±1/16 .XX = ±.03 ±1/2° .XXX = ±.010								
	INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-1994					TITLE BACK SLIDER PANEL,X-LITE,BLACK			
APPROVALS									
DRAWN BY: NMV	THIRD ANGLE PROJECTION								
DRAWN DATE: 5/9/13		B	2102	08/05/13	SIZE	DWG NO.	REV.		
APPR'D BY: AEM		A	2066	5/9/13	B	BSI-1305015-00	B		
APPR'D DATE: 5/9/13	DO NOT SCALE DRAWING	REV	ECN#	DATE			SCALE	1:4	SHEET

NOTES: UNLESS OTHERWISE SPECIFIED.

1. BREAK SHARP EDGES, DEBURR.

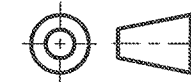


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UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.
TOLERANCES ARE:

FRACTIONS DECIMAL ANGLES
±1/16 .XX = ±.03 ±1/2°
.XXX = ±.010

INTERPRET DIMENSIONS AND
TOLERANCES PER ASME
Y14.5-1994



DO NOT SCALE DRAWING



3333 Vaca Valley Parkway Ste 800
Vacaville, CA 95688
Tel: 888-800-3691
www.barriersystemsinc.com

APPROVALS

DRAWN BY: AEM

DRAWN DATE: 12/22/10

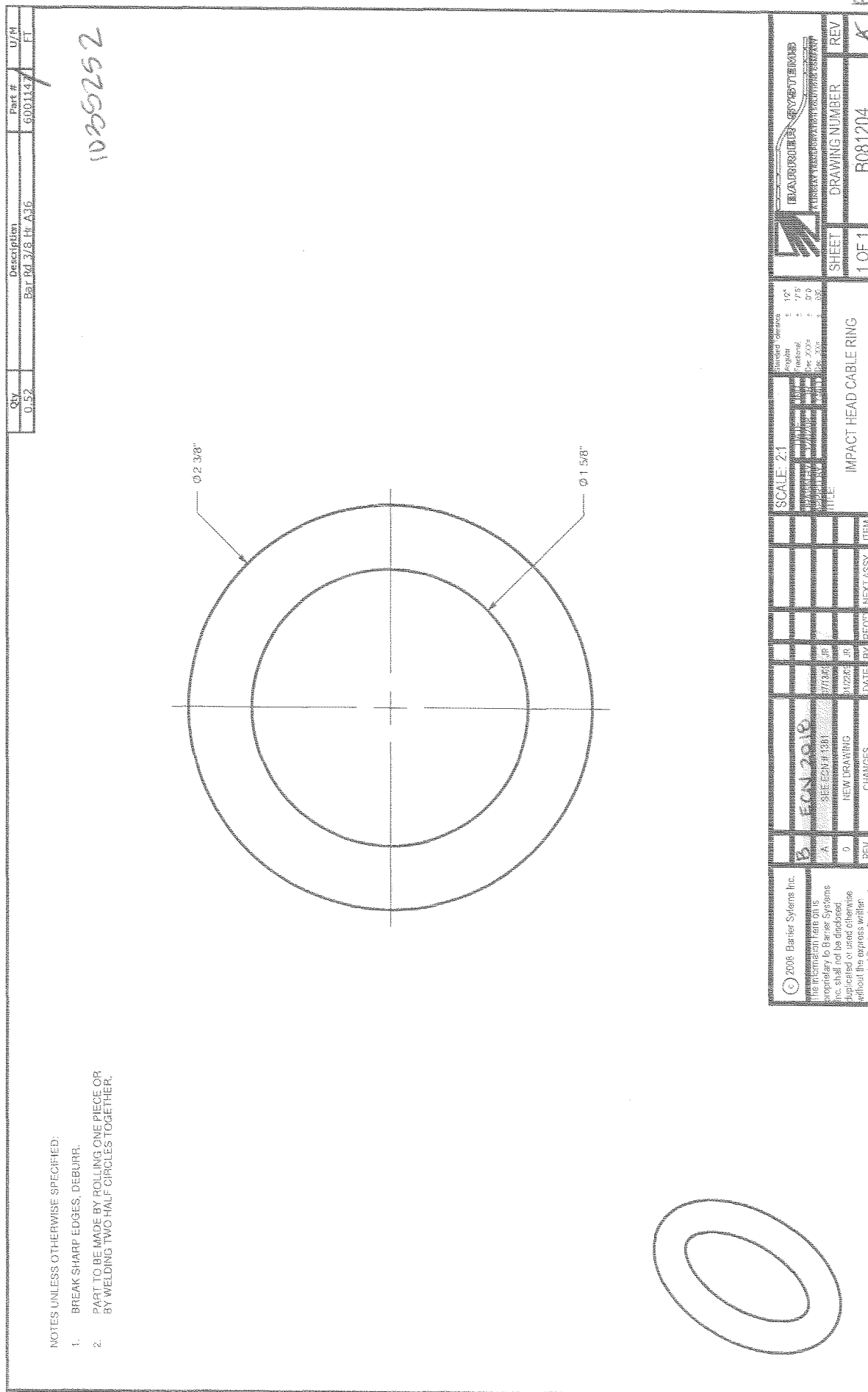
APPR'D BY: GAD

APPR'D DATE: 2/25/11

THIRD ANGLE PROJECTION

C	2102	08/05/13
B	2020	3/14/13
A	1751	9/15/11
0	1664	02/25/11
REV	ECN#	DATE

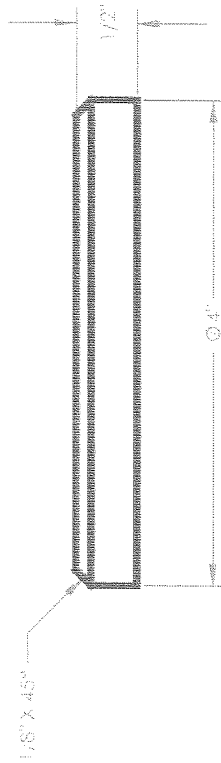
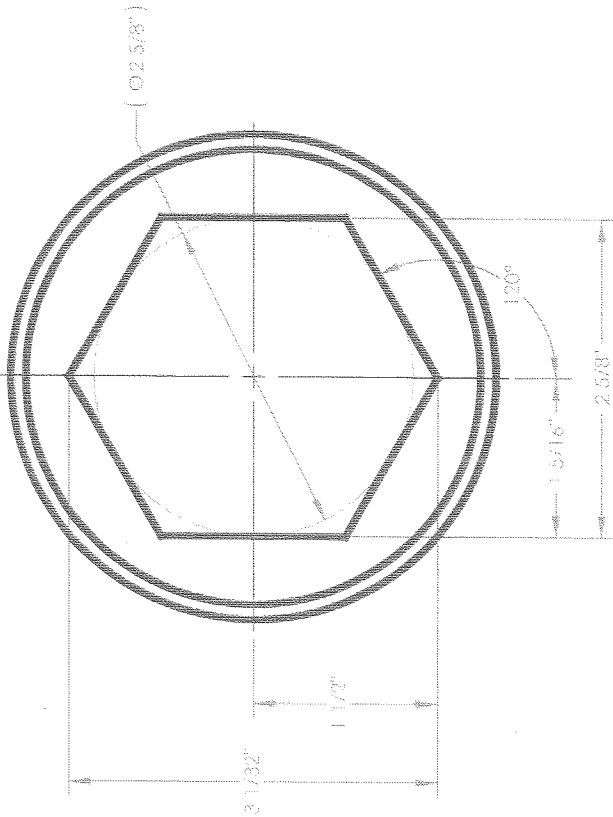
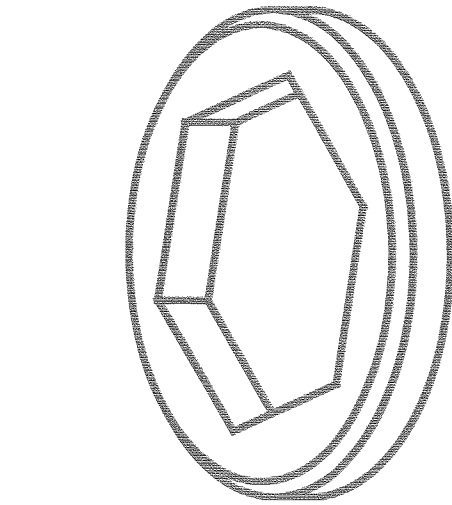
SLIDER BACK PLATE			
SIZE	DWG NO.	BSI-1012095-00	
B			
SCALE	1:4	SHEET	1 OF 1



- ① update rev level to B
- ② add Lindsay material to BOM
- ③ update custom properties

Find No.	QTY	Description	UOM	No
1	01	PL 1/2" H A36	SCF	8001993

1019090



		Barrier Systems A LINDSAY TRANSPORTATION SOLUTIONS COMPANY	
SCALE: 1:1 DRAWN BY: GAO APP'D BY: JSM	DATE: 04/05/18 DATE: 11/20/18	SHEET 1 OF 1	DRAWING NUMBER B040402
TITLE HEX PLATE 2 1/2", SOCKET		REV A	REV A
B ECN 2018 SEE ECN# 1433	A CHANGES	REV A	DATE 11/20/18
© 2019 Barrier Systems Inc. The information here on is proprietary to Barrier Systems Inc. and shall not be disclosed, duplicated or used otherwise without the express written approval of Barrier Systems Inc.		RECD: NEXT ASSY: ITEM	

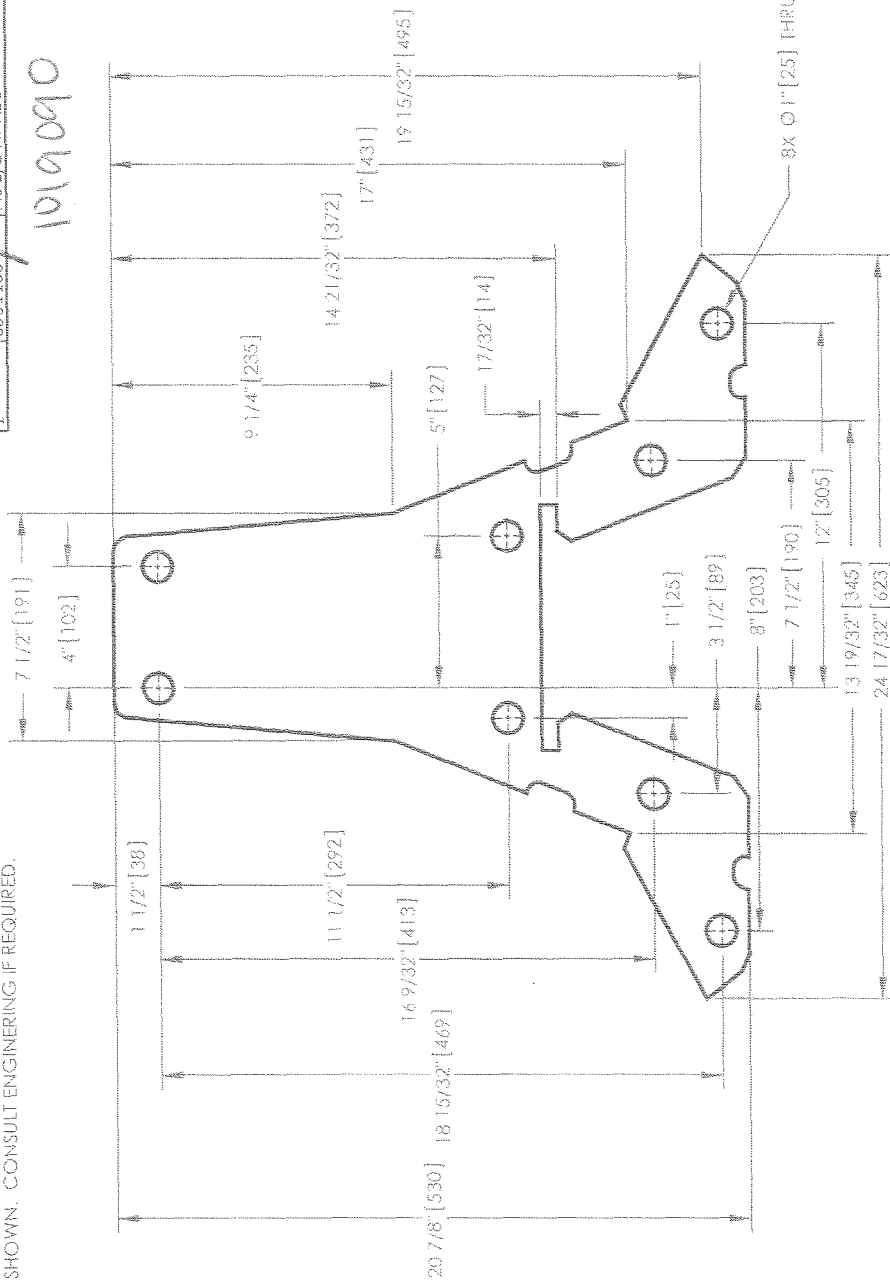
- ① update rev level to B
- ② add lindsay material to BOM
- ③ update custom properties

ECN: 2018
P/N: B040402

BSI-1008017-00 BACK FLANGE, ADAPTER MOUNT - Production BOM

Find No.	No.	Description	Quantity per	Unit of Measure
1	60011166	PLT 1/2 Ht A36	2.50	SQF

10190910

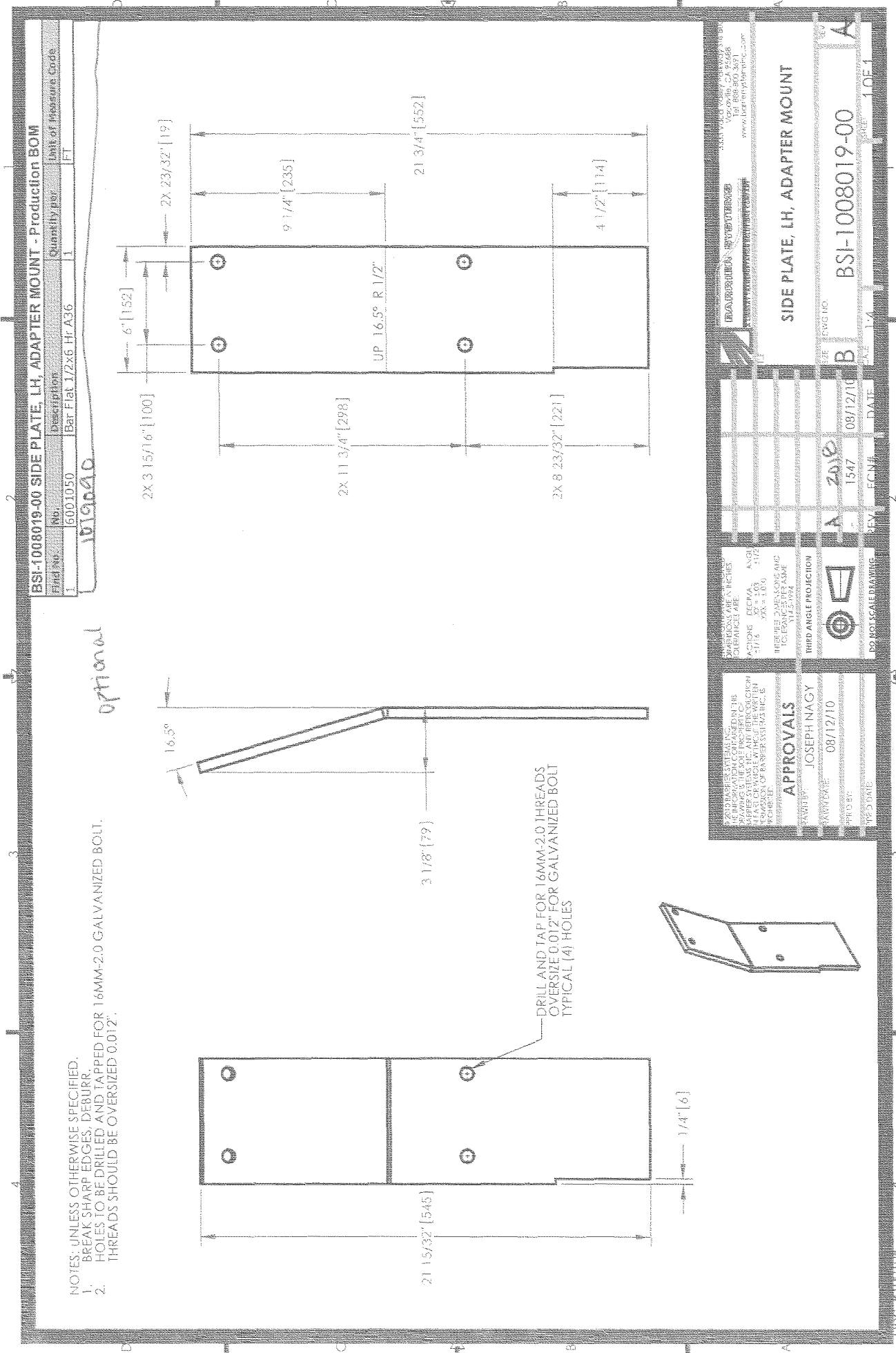


- NOTES: UNLESS OTHERWISE SPECIFIED,
 1. BREAK SHARP EDGES, DEBURR.
 2. NOT ALL DIMENSIONS SHOWN. CONSULT ENGINEERING IF REQUIRED.

APPROVALS DRAWN BY: JOSEPH NAGY DATE: 08/12/10 CHECKED BY: [Signature] DATE: 08/12/10		THIRD ANGLE PROJECTION DO NOT SCALE DRAWING		INTERSECTION POINTS: DISTANCES ARE: 1/16" DECIMAL 1/32" FRACTION 1/16" DECIMAL 1/32" FRACTION 1/16" DECIMAL 1/32" FRACTION		BACK FLANGE, ADAPTER MOUNT BSI-1008017-00 REV: A DATE: 08/12/10 ECN#: 1547 DATE: 08/12/10 ECN#: 1547	
---	--	--	--	---	--	--	--

- ECN: 2018
 P/N: BSI-1008017-00
- ① update rev level to A
 - ② add Lindsay material to BOM
 - ③ update custom properties.

ECN: 2018
PIN: B51-1008018-00



- EON: 2018
 P/N: BSI-1008019-00
- ① update rev level to A
 - ② add optional Lindsay material to BOM
 - ③ update custom properties

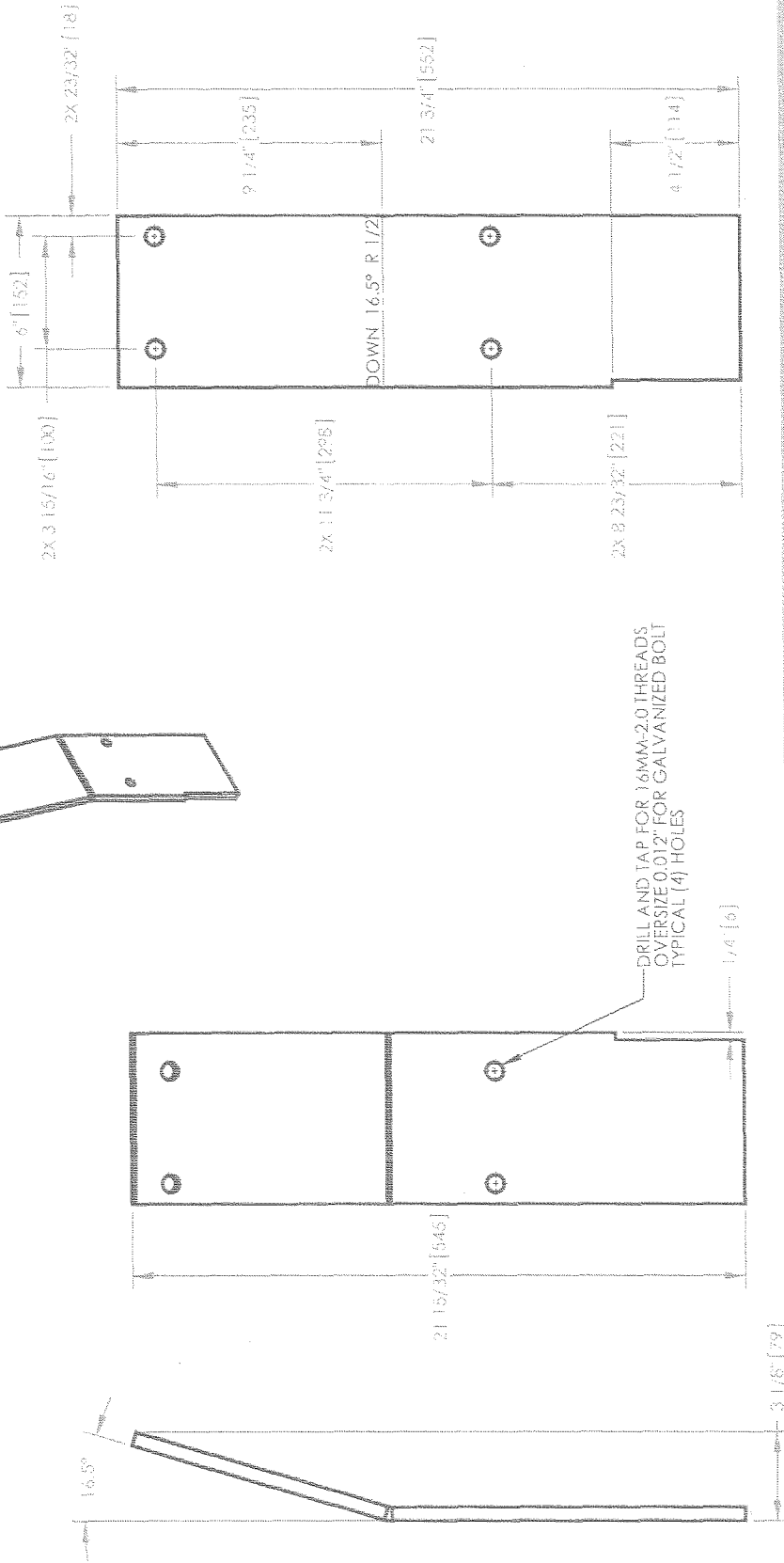
BSI-1008020-00 SIDE PLATE, RH, ADAPTER MOUNT - Production BOM

Item No.	Description	Quantity per Unit of Measure Code
1	6001050 Bar Flat 1/2x6 Hr A36	1

optional

1019090

- NOTES: UNLESS OTHERWISE SPECIFIED,
 1. BREAK SHARP EDGES, DEBUR.
 2. HOLES TO BE DRILLED AND TAPPED FOR 16MM-2.0 GALVANIZED BOLT. THREADS SHOULD BE OVERSIZED 0.012".



APPROVALS DESIGNED BY: JOSEPH NAGY DRAWN DATE: 08/12/10 DATE DATE:		THIS DRAWING IS THE PROPERTY OF BSI. IT IS TO BE USED ONLY FOR THE PROJECT AND NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF BSI.	
APPROVED BY: [Signature] DATE: 08/12/10		APPROVED BY: [Signature] DATE: 08/12/10	
CHECKED BY: [Signature] DATE: 08/12/10		CHECKED BY: [Signature] DATE: 08/12/10	
REVISIONS: [Table with 4 columns: Rev, Description, Date, By]		REVISIONS: [Table with 4 columns: Rev, Description, Date, By]	
PART NAME: SIDE PLATE, RH, ADAPTER MOUNT		PART NO.: BSI-1008020-00	
DRAWING NO.: B		SCALE: 1:8	
DATE: 08/12/10		REV: 1 OF 1	

ECN: 2018

P/N: BSI-1008020-00

- ① update rev level to A
 ② add optional Lindsay material to BOM
 ③ update custom properties

NOTES UNLESS OTHERWISE SPECIFIED:

- BREAK SHARP EDGES, DEBURR.

QTY 0.44
Description PL 1/4 HT A36
Part # 5001163 / SOT
U/M 9720855

The drawing shows three views of a metal plate. The top view is a rectangle with overall dimensions of 12 inches by 15 1/2 inches. It features a central section with a width of 9 7/8 inches and a height of 14 1/8 inches. This central section has rounded ends with a radius of R 1/4 inch. The bottom view shows the same plate from below, with a total length of 13 1/2 inches. It includes a detailed cross-section showing a thickness of 1/2 inch and various radii: 1 11/16 inch, 1 3/16 inch, 3 13/16 inch, and 3X R 1/4 inch. A small detail view at the top left shows a corner with a radius of 2 3/16 inch. A note indicates a flat pattern for reference only. A scale of 1:3 is provided. The drawing is identified as B100257, SHEET 1 OF 1, with a drawing number of B100257 and a revision of A.

FLAT PATTERN FOR REFERENCE ONLY

SCALE: 1:3

SPRING, LEANING POST

SHEET	DRAWING NUMBER	REV
1 OF 1	B100257	A

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REVISIONS

REV	DATE	BY	DESCRIPTION
0	02/01/10	JL	SEE ER # 168
1	02/01/10	JL	SEE ER # 165

CHANGES

ITEM

DATE

BY

BEAT

NEXT ASSY

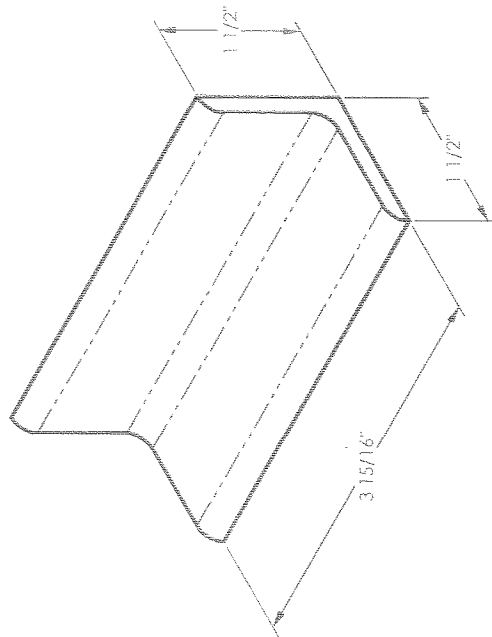
ITEM

- ① Update rev level to B
- ② add Lindsay material to BOM
- ③ update custom properties

ENC: 2018
P/N: B100257

Find No.	QTY	Description	UOM	No.
1	0.40	Angle 1 1/2x1 1/2x1/4 Hr A36	FT	6001013

5151240



NOTES: UNLESS OTHERWISE SPECIFIED,

1. BREAK SHARP EDGES, DEBURR.

[illegible]

2010

P/N: B91-1012083-00

- ① update rev level to A
- ② add Lindsay material to BOM
- ③ update custom properties

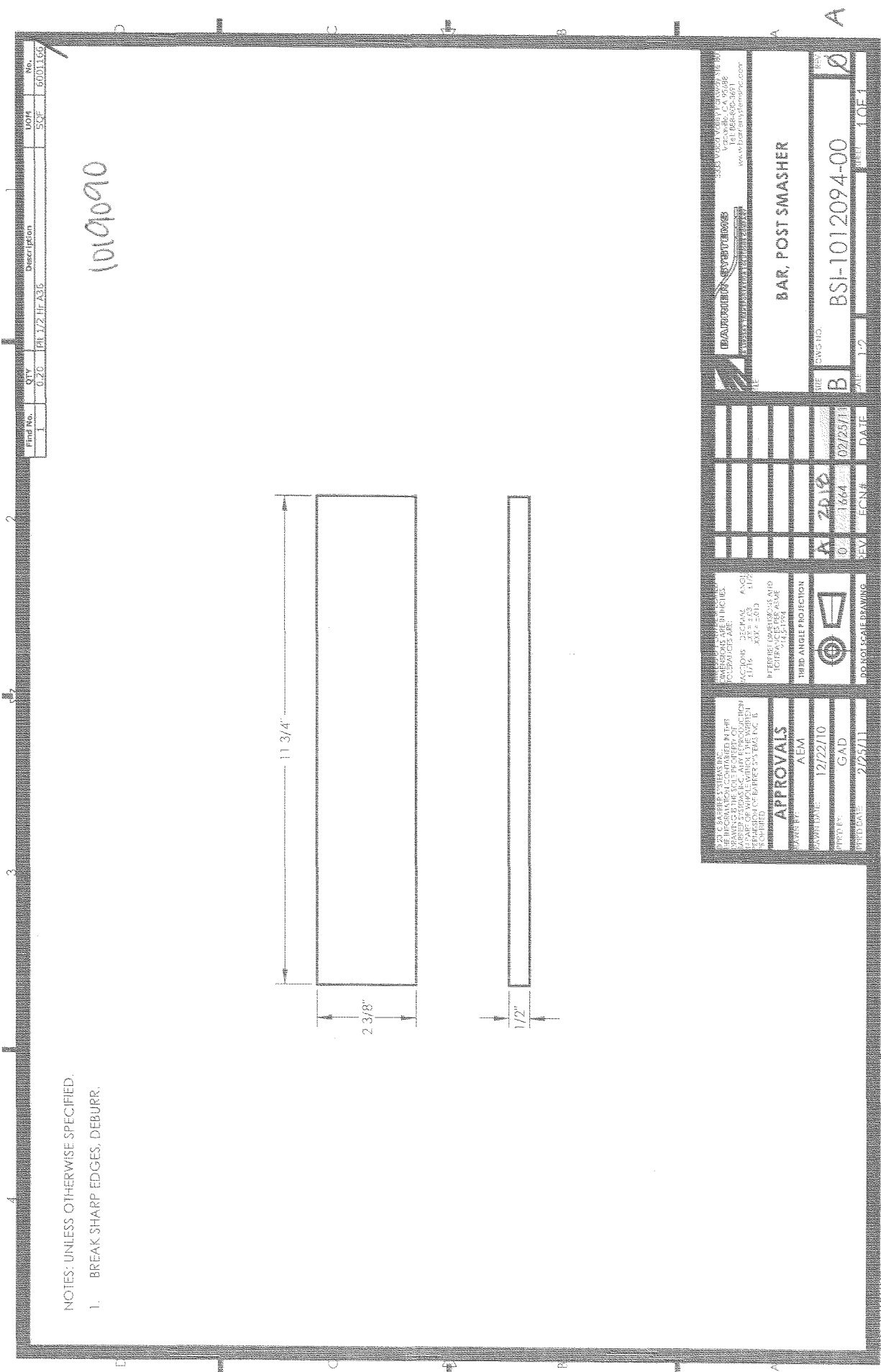
LINDSAY-MCCARTHY00131479

E/CN: 2018
P/N: BSI-1012085-00

- ① update rev level to A
- ② add Lindsay material to BOM
- ③ update custom properties.

LINDSAY-MCCARTHY00131480

- ECN: 2018
P/N: B51-1012091-00
- ① Update rev level to A
 - ② add Lindsay material to BOM
 - ③ update custom properties



NOTES: UNLESS OTHERWISE SPECIFIED:
1. BREAK SHARP EDGES, DEBURR.

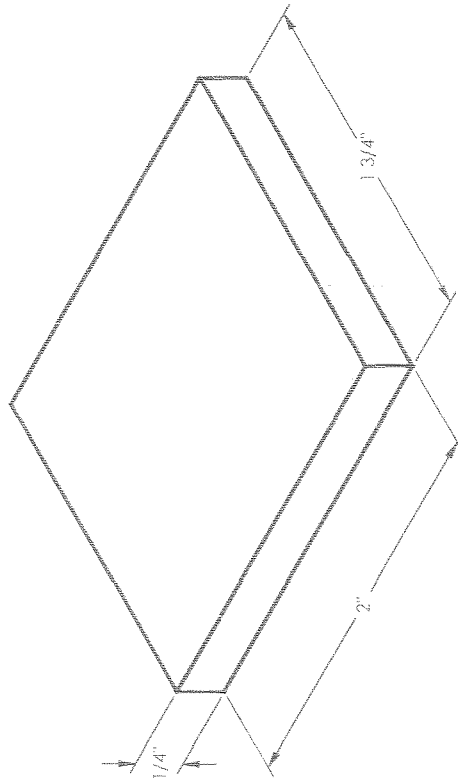
1019090

APPROVALS DRAWN BY: AEM DATE: 12/22/10 CHECKED: GAD DATE: 2/25/11		DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS DECIMALS ANGLES 1/16 .001 .001 1/8 .002 .001 1/4 .003 .001 1/2 .004 .001 3/4 .005 .001 1 .006 .001 1 1/2 .007 .001 2 .008 .001 3 .009 .001 4 .010 .001 5 .011 .001 6 .012 .001 8 .014 .001 10 .016 .001 12 .018 .001 14 .020 .001 16 .022 .001 18 .024 .001 20 .026 .001 24 .030 .001 30 .036 .001 36 .042 .001 48 .054 .001 60 .066 .001 72 .078 .001 96 .096 .001 120 .114 .001 144 .132 .001 180 .165 .001 240 .210 .001 300 .255 .001 360 .300 .001 480 .360 .001 600 .420 .001 720 .480 .001 960 .600 .001 1200 .720 .001 1440 .840 .001 1800 .990 .001 2400 .990 .001 3000 .990 .001 3600 .990 .001 4800 .990 .001 6000 .990 .001 7200 .990 .001 9600 .990 .001 12000 .990 .001 14400 .990 .001 18000 .990 .001 24000 .990 .001 30000 .990 .001 36000 .990 .001 48000 .990 .001 60000 .990 .001 72000 .990 .001 96000 .990 .001 120000 .990 .001 144000 .990 .001 180000 .990 .001 240000 .990 .001 300000 .990 .001 360000 .990 .001 480000 .990 .001 600000 .990 .001 720000 .990 .001 960000 .990 .001 1200000 .990 .001 1440000 .990 .001 1800000 .990 .001 2400000 .990 .001 3000000 .990 .001 3600000 .990 .001 4800000 .990 .001 6000000 .990 .001 7200000 .990 .001 9600000 .990 .001 12000000 .990 .001 14400000 .990 .001 18000000 .990 .001 24000000 .990 .001 30000000 .990 .001 36000000 .990 .001 48000000 .990 .001 60000000 .990 .001 72000000 .990 .001 96000000 .990 .001 120000000 .990 .001 144000000 .990 .001 180000000 .990 .001 240000000 .990 .001 300000000 .990 .001 360000000 .990 .001 480000000 .990 .001 600000000 .990 .001 720000000 .990 .001 960000000 .990 .001 1200000000 .990 .001 1440000000 .990 .001 1800000000 .990 .001 2400000000 .990 .001 3000000000 .990 .001 3600000000 .990 .001 4800000000 .990 .001 6000000000 .990 .001 7200000000 .990 .001 9600000000 .990 .001 12000000000 .990 .001 14400000000 .990 .001 18000000000 .990 .001 24000000000 .990 .001 30000000000 .990 .001 36000000000 .990 .001 48000000000 .990 .001 60000000000 .990 .001 72000000000 .990 .001 96000000000 .990 .001 120000000000 .990 .001 144000000000 .990 .001 180000000000 .990 .001 240000000000 .990 .001 300000000000 .990 .001 360000000000 .990 .001 480000000000 .990 .001 600000000000 .990 .001 720000000000 .990 .001 960000000000 .990 .001 1200000000000 .990 .001 1440000000000 .990 .001 1800000000000 .990 .001 2400000000000 .990 .001 3000000000000 .990 .001 3600000000000 .990 .001 4800000000000 .990 .001 6000000000000 .990 .001 7200000000000 .990 .001 9600000000000 .990 .001 12000000000000 .990 .001 14400000000000 .990 .001 18000000000000 .990 .001 24000000000000 .990 .001 30000000000000 .990 .001 36000000000000 .990 .001 48000000000000 .990 .001 60000000000000 .990 .001 72000000000000 .990 .001 96000000000000 .990 .001 120000000000000 .990 .001 144000000000000 .990 .001 180000000000000 .990 .001 240000000000000 .990 .001 300000000000000 .990 .001 360000000000000 .990 .001 480000000000000 .990 .001 600000000000000 .990 .001 720000000000000 .990 .001 960000000000000 .990 .001 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NOTES: UNLESS OTHERWISE SPECIFIED.

1. BREAK SHARP EDGES, DEBURR.

a720855



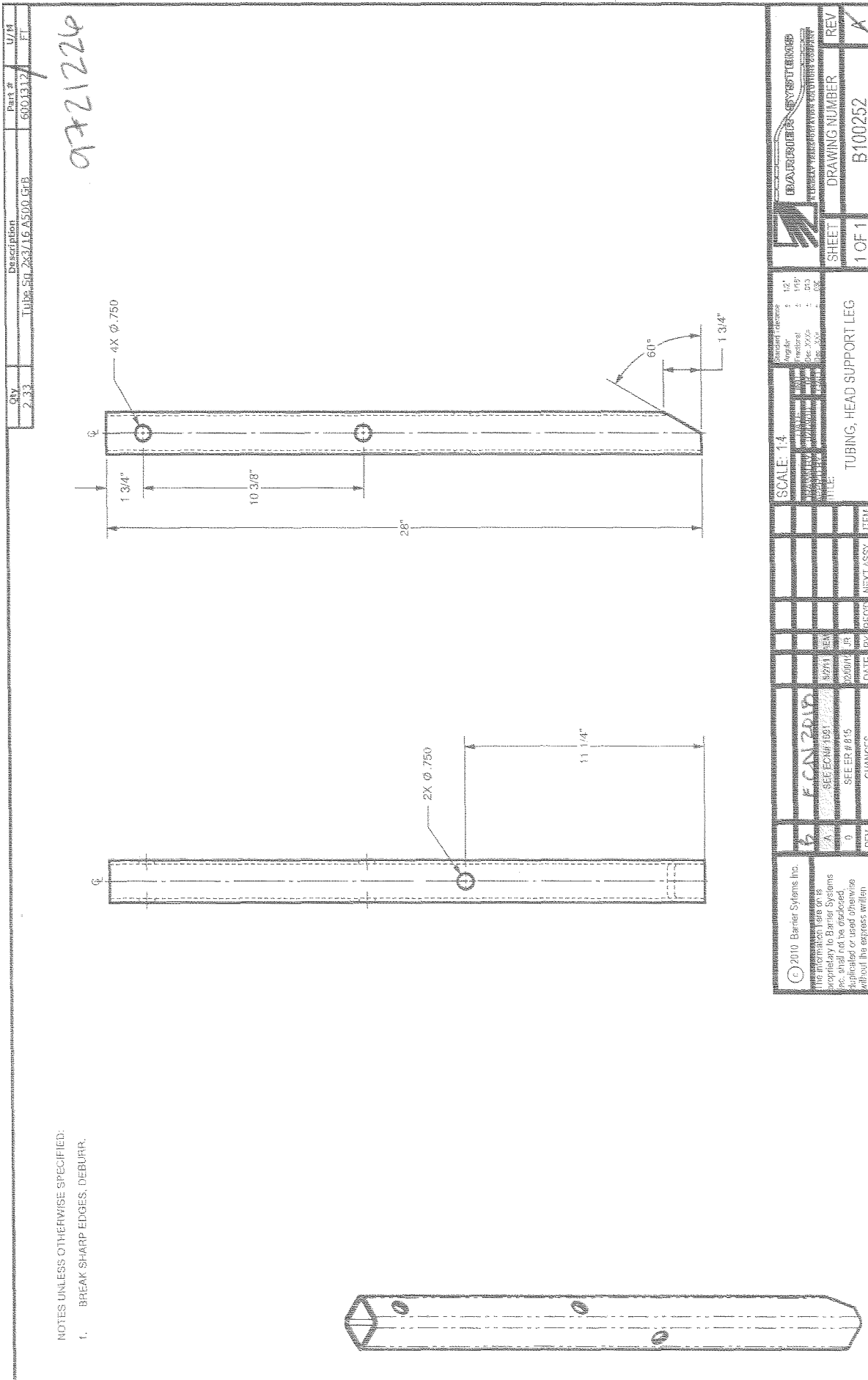
0.216 BARBER SYSTEMS, INC. 12000 W. 10TH AVE. DENVER, CO 80202 (303) 733-1111 WWW.BARBERSYSTEMS.COM		0.216 BARBER SYSTEMS, INC. 12000 W. 10TH AVE. DENVER, CO 80202 (303) 733-1111 WWW.BARBERSYSTEMS.COM	
APPROVALS DRAWN BY: AEM CHECKED BY: GAD DATE: 1/27/11 DATE: 7/25/11		REVISIONS REVISION NO. 1 REVISION DESCRIPTION DATE 02/25/11 BY B	
PART NAME: TAB, CABLE PLATE PART NO.: BSI-1101206-00 REV: 0		PART NAME: TAB, CABLE PLATE PART NO.: BSI-1101206-00 REV: 0	

- ECN: 2018
P/N: BSI-1101206-00
- ① Update rev level to A
 - ② add Lindsay material to BOM
 - ③ update custom properties

ECN: 2018
P/N: B061106

- ① update rev level to B
- ② add Lindsay material to BOM
- ③ update custom properties





EON: 2010
P/N: B100252

① update rev level to B
② add Lindsay material to BOM
③ update custom properties

NOTES UNLESS OTHERWISE SPECIFIED:
 1. BREAK SHARP EDGES, DEBURR.

FLAT PATTERN FOR REFERENCE ONLY

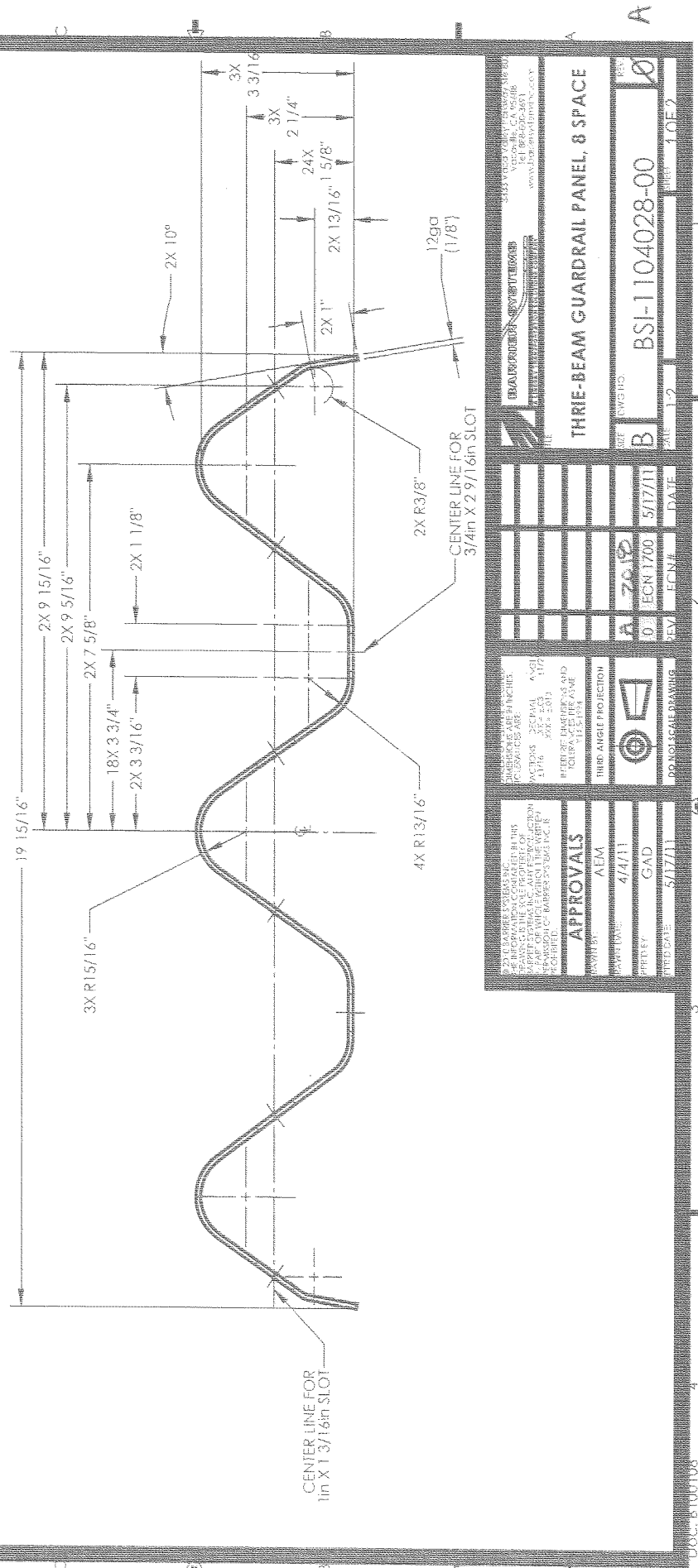
ECN: 2018
P/N: B100253

- ① update rev level to B
- ② add lindsay material to Bom
- ③ update custom properties

 α

NOTES: UNLESS OTHERWISE SPECIFIED

1. CORRUGATED SHEET PILE GUARDRAIL SHALL CONFORM TO THE CURRENT REQUIREMENTS OF AASHTO M180.
2. THE SECTION SHALL BE MANUFACTURED FROM SHEETS WITH A NOMINAL WIDTH OF 750mm [29 1/2in].
3. THRIE BEAM MAY BE EITHER TYPE II (ZINC-COATED) OR TYPE IV (CORROSION RESISTANT STEEL).
4. CORROSION RESISTANT STEEL SHOULD CONFORM TO ASTM A666 FOR TYPE IV MATERIAL AND SHALL NOT BE ZIN-COATED, PAINTED OR OTHERWISE TREATED.

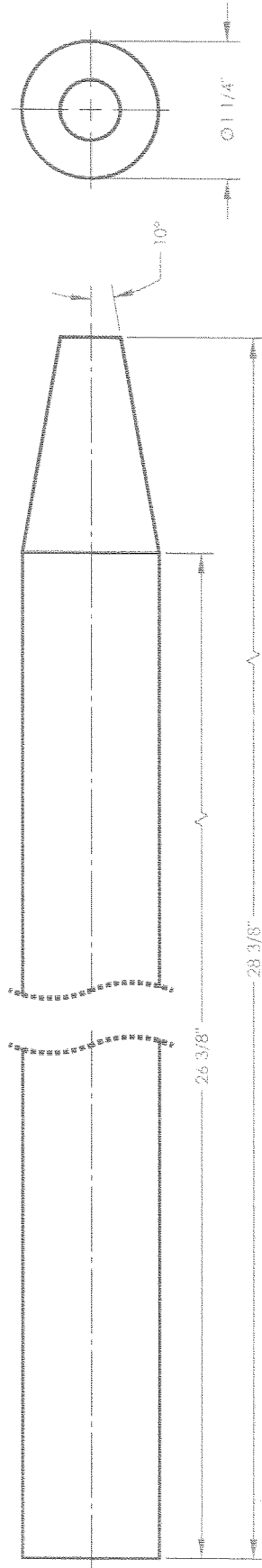


ECN: 2018
P/N: BSI-1104028-00

① update rev level to A
② update custom properties

NOTES: UNLESS OTHERWISE SPECIFIED.

1. BREAK SHARP EDGES, DEBURR.

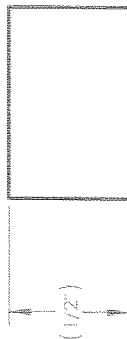
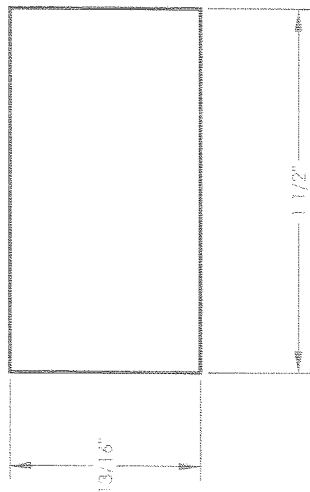
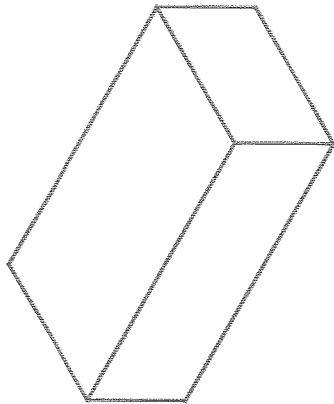


APPROVALS DATE: 5/17/11 BY: GAD DATE: 5/17/11		INTERPRETATION DATE: 5/17/11 BY: GAD		DESIGN DATE: 5/17/11 BY: GAD	
THIRD ANGLE PROJECTION FIRST ANGLE		INTERPRETATION DATE: 5/17/11 BY: GAD		DESIGN DATE: 5/17/11 BY: GAD	
APPROVALS DATE: 5/17/11 BY: GAD DATE: 5/17/11		INTERPRETATION DATE: 5/17/11 BY: GAD		DESIGN DATE: 5/17/11 BY: GAD	
THIRD ANGLE PROJECTION FIRST ANGLE		INTERPRETATION DATE: 5/17/11 BY: GAD		DESIGN DATE: 5/17/11 BY: GAD	

ECN: 2018
 P/N: BSI-1104032-00

① update rev level to A
 ② update custom properties

0000



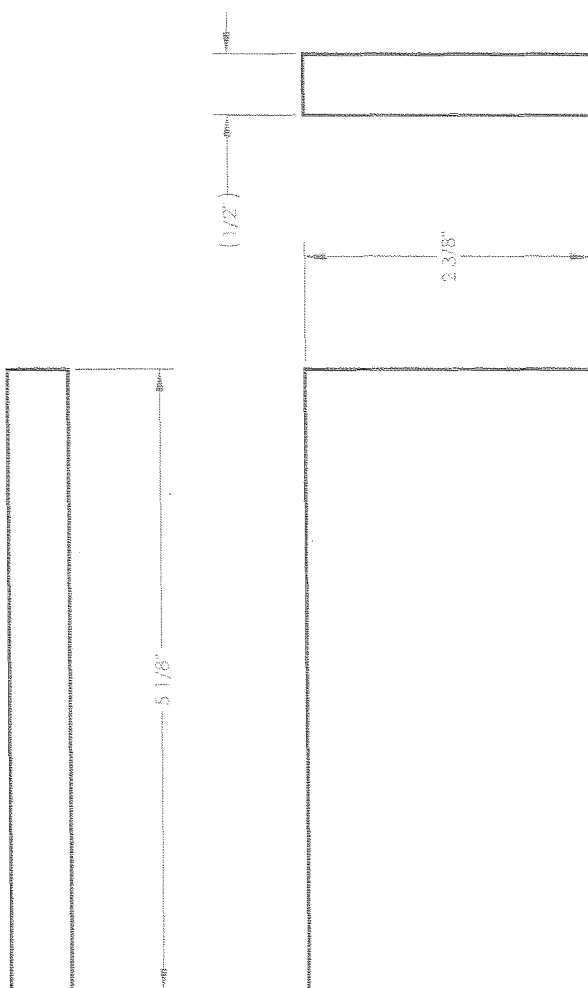
NOTES: UNLESS OTHERWISE SPECIFIED:
1. BREAK SHARP EDGES, DEBURR.

2012 BARBER SYNTAK INC. DRAWING IS THE PROPERTY OF BARBER SYNTAK INC. ANY REPRODUCTION OR TRANSMISSION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF BARBER SYNTAK INC. IS PROHIBITED.	DIMENSIONS ARE IN INCHES. ACTIONS: DECIMALS: 1/16 FRACTIONS: 1/8, 1/4, 1/2, 3/4, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 81
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ECN: 2018
P/N: B51-1104033-00

- ① update rev level to A
- ② add Lindsay material to BDM
- ③ update custom properties

1. BREAK SHARP EDGES, DEBURR.

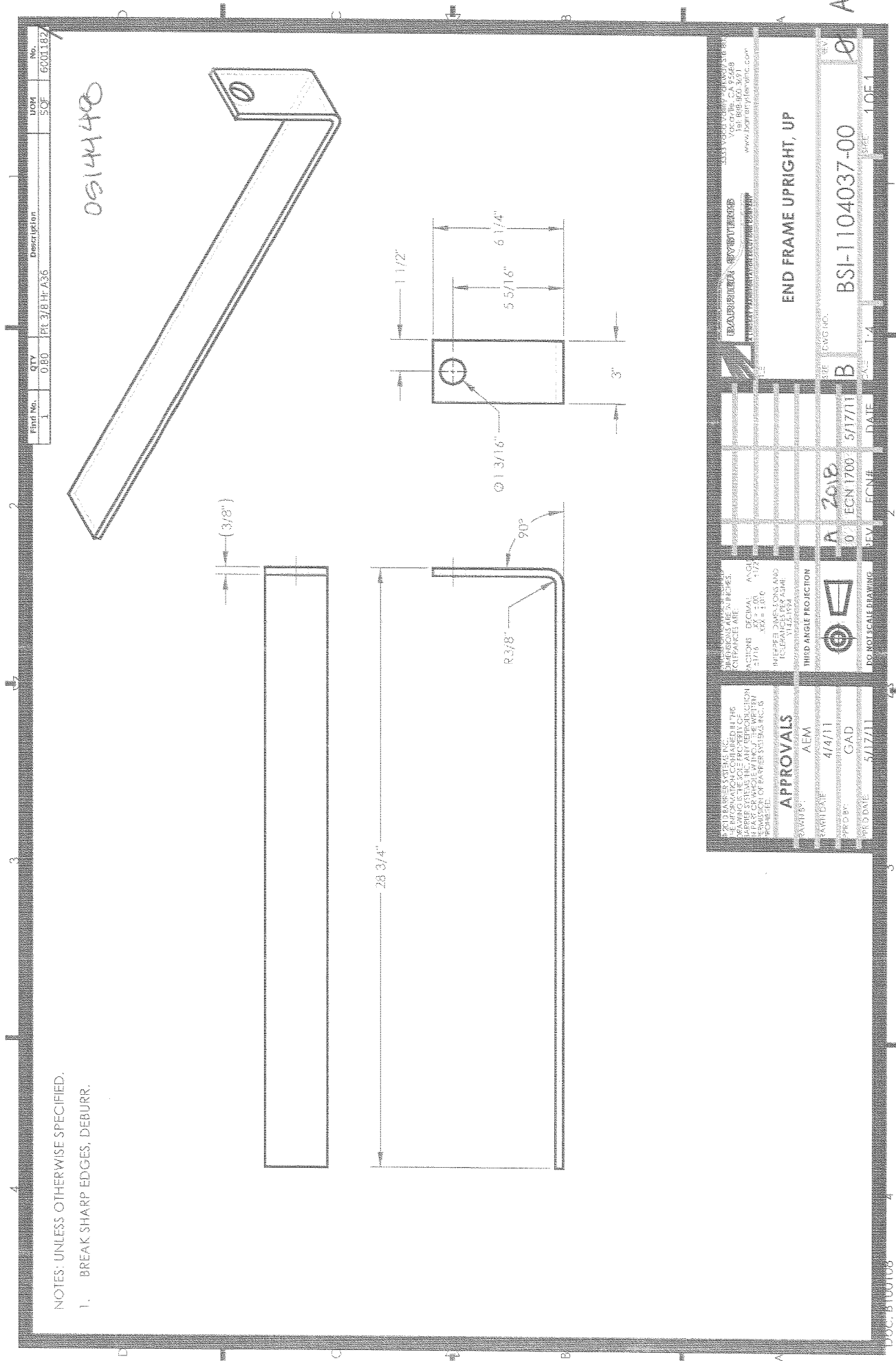


0709

[illegible]

EO#: 2018
P/N: B51-1104035-20

- ① update rev level to A
- ② add Lindsay material to BOM
- ③ update custom properties



- ECN: 2018
P/N: BSI-1104037-00
- ① update rev level to A
 - ② add Lindsay material to BOM
 - ③ update custom properties

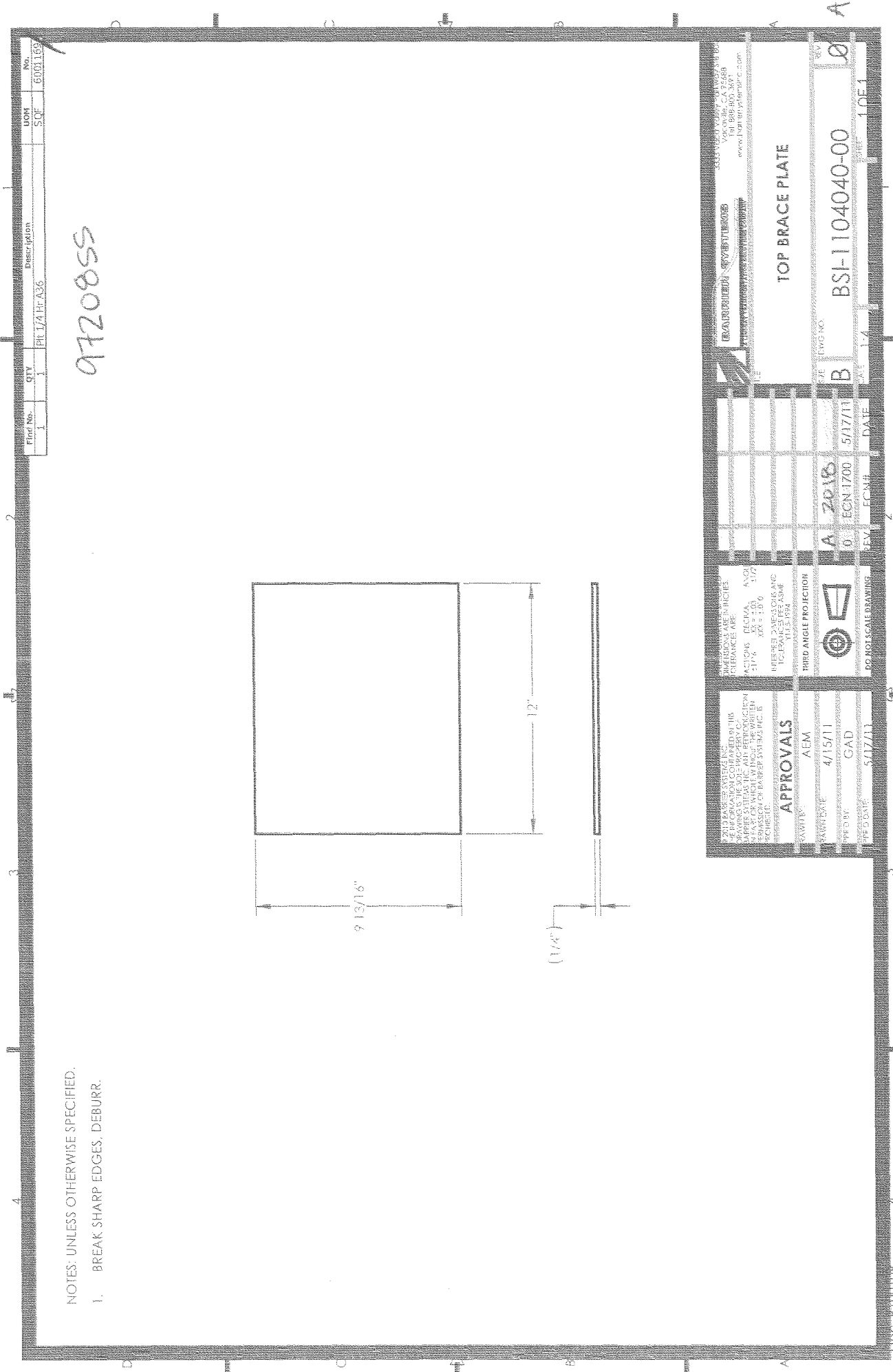
3

5

2

3

- 5



- ① Update rev level to A
- ② add Lindsay material to BOM
- ③ update custom properties

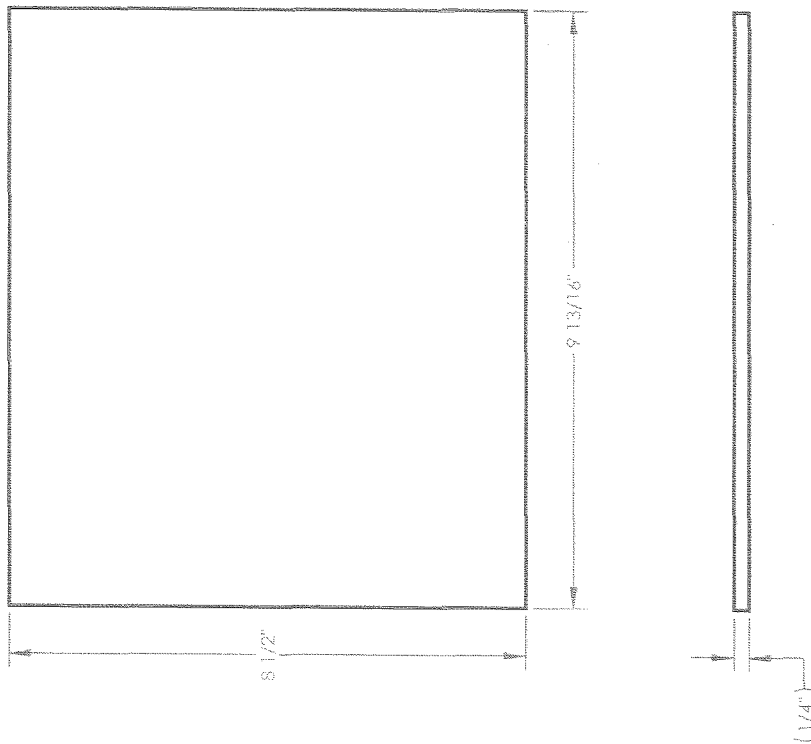
ECN: 2018
P/N: BSI-1104040-00

Find No.	QTY	Description	UOM	No.
1	0.50	Plt 1/4 Hr A36	SQF	6001169

NOTES: UNLESS OTHERWISE SPECIFIED.

1. BREAK SHARP EDGES, DEBURR.

SS 80270

[illegible]

ENC: 2018

P/N: 881-1104211-00

- ① update rev level to A
- ② add Lindsay material to BOM
- ③ update custom properties.

EXHIBIT C



505 Crown Point Ave
Omaha, NE 68114

Customer:

Delucca Fence Company, Inc.

Sales Order:

22633

Customer PO:

TL 5

BOL#:

20160829

Order Quantity:

120

System

XLTKUS

Print Date:

8/29/2016

Shipped To:

NC

CERTIFICATE OF COMPLIANCE

Lindsay Transportation Solutions certifies that the following order has been manufactured in accordance with the specifications set forth in NCHRP-350 standards.



State of Nebraska, County of Douglas

Sworn and Subscribed before me the 1st day of September 2016

Notary Public:

Kurtis D. Samson

Commission Expires:

July 15, 2020

Lindsay Transportation Solutions

Certified By:

Andrew Lucare 8/6/16

Quality Assurance



505 Crown Point Ave
Omaha, NE 68114

Customer:

Delucca Fence Company, Inc.

Sales Order:

22633

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Order Quantity:

120

System

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Print Date:

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NC

CERTIFICATE OF COMPLIANCE

Lindsay Transportation Solutions certifies that the following order has been manufactured in accordance with the specifications set forth in NCHRP-350 standards.

Pieces	Description	Item Number
120	XLITE,CRIMPED POST HOLES,GALV	BSI-1310027-00
120	POST II, X-LITE, GALV	BSI-1012086-00
120	SLIDER PANEL,FRONT,XLITE,GALV	BSI-1012093-00
120	Slider Bracket, X-Lite	BSI-1012090-00
120	BACK SLIDER PANEL,X-LITE,GALV	BSI-1012096-00
240	Ground Strut Assembly, X-Lite	BSI-1101209-00
120	Ground Strut Angle, GALV	BSI-1012098-00
240	Kit, X-Tension Shear Bolt,	K080123
120	IMPACT HEAD,X-LITE, GALV	BSI-1012103-00
120	Cable Anchor Assembly, X-Lite	BSI-1012104-00
120	Soil Plate, 18x18, Galv,	BSI-1312100-00
120	X-Lite Distributor HW Kit	BSI-1410022-KT
120	X-Lite Tangent Installation	MANXLT
120	XLITE,CRIMPED POST SLOTS,GALV	BSI-1310024-00

CERTIFICATION NOTES

ALL SYSTEMS ARE NCHRP 350 COMPLIANT

ALL STEEL USED WAS MELTED AND MANUFACTURED IN THE USA AND COMPLIES WITH THE BUY AMERICA ACT

ALL GUARDRAIL MEETS AASHTO M-180, ALL STRUCTURAL STEEL MEETS ASTM A36

ALL COATINGS AND PROCESSES OF THE STEEL ARE IN FULL COMPLIANCE WITH THE BUY AMERICA ACT

ALL MAJOR COMPONENTS (IF GALVANIZED) WERE HOT DIPPED GALVANIZED AND CONFORM TO ASTM A-123

CABLE ASSEMBLY CONFORMS TO AASHTO FCA01. MINIMUM BREAK STRENGTH OF 42,700 POUNDS.

EXHIBIT D

IN THE CIRCUIT COURT OF COLE COUNTY, MISSOURI

MISSOURI HIGHWAYS &
TRANSPORTATION COMMISSION,

Plaintiff,

vs.

Case No.: _____

LINDSAY CORPORATION
Serve: CT Corporation System
5601 South 59th Street,
Suite C
Lincoln, Nebraska 68516

JURY TRIAL DEMANDED

and

LINDSAY TRANSPORTATION
SOLUTIONS, LLC
Serve: CT Corporation System
5601 South 59th Street,
Suite C
Lincoln, Nebraska 68516

and

LINDSAY INTERNATIONAL HOLDINGS
(USA), LLC
Serve: CT Corporation System
5601 South 59th Street,
Suite C
Lincoln, Nebraska 68516

and

LINDSAY SALES HOLDING CO., LLC
Serve: CT Corporation System
5601 South 59th Street,
Suite C
Lincoln, Nebraska 68516

and

SAFE TECHNOLOGIES, INC.
Serve: Harvard Business Services, Inc.
16192 Coastal Highway
Lewes, Delaware 19958

and

BARRIER SYSTEMS, LLC.
Serve: The Corporation Trust Company
Corporation Trust Center 1209 Orange Street,
Wilmington, Delaware 19801

and

LINDSAY IRRIGATION SOLUTIONS,
LLC
Serve: CT Corporation System
5601 South 59th Street,
Suite C
Lincoln, Nebraska 68516

and

VALMONT INDUSTRIES, INC.
Serve: CT Corporation System
120 South Central Avenue
Clayton, MO 63105

and

VALMONT HIGHWAY DISTRIBUTION
LIMITED
Serve: 12 Offenhauser Dr.
East Tamaki, Auckland, New Zealand 2013

Defendants.

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION'S
PETITION FOR DAMAGES**

COMES NOW the Missouri Highways and Transportation Commission, by and through its undersigned counsel, and for its Petition for Damages against Lindsay Corporation; Lindsay Transportation Solutions, LLC; Lindsay International Holdings (USA), LLC; Lindsay Sales

Holding Co., LLC; Safe Technologies, Inc.; Barrier Systems, Inc.; Lindsay Irrigation Solutions, LLC; Valmont Industries, Inc.; and Valmont Highway (collectively “Defendants”), hereby states as follows:

PARTIES

1. The Missouri Highways and Transportation Commission (“MHTC”) is a six-member bipartisan board that governs the Missouri Department of Transportation (“MODOT”). MHTC is authorized to pursue legal relief under Mo. Rev. Stat. § 226.971.

2. MODOT is an agency of the state of Missouri that is responsible for maintaining various public roadways throughout Missouri.

3. Lindsay Corporation (“Lindsay Corp.”) is a corporation that was incorporated under the laws of Delaware with its principal place of business in Omaha, Nebraska. Lindsay Corp. may be served with process through its registered agent, CT Corporation System at 5601 South 59th Street, Suite C, Lincoln, Nebraska 68516.

4. Lindsay Transportation Solutions, LLC (“Lindsay Solutions”), is a limited liability company organized under the laws of California with its principal place of business in Omaha Nebraska. Lindsay Solutions may be served with process through its registered agent, CT Corporation System at 5601 South 59th Street, Suite C, Lincoln, Nebraska 68516.

5. Lindsay International Holdings (USA), LLC (“Lindsay International Holdings”), is a limited liability company organized under the laws of Nebraska with its principal place of business in Omaha Nebraska. Lindsay International Holdings may be served with process through its registered agent, CT Corporation System at 5601 South 59th Street, Suite C, Lincoln, Nebraska 68516.

6. Lindsay Sales Holding Co., LLC (“Lindsay Sales”), is a limited liability company organized under the laws of Nebraska with its principal place of business in Omaha Nebraska. Lindsay Sales may be served with process through its registered agent, CT Corporation System at 5601 South 59th Street, Suite C, Lincoln, Nebraska 68516.

7. Safe Technologies, Inc. (“Safe Technologies”) is a Corporation organized under the laws of Delaware and is a wholly owned subsidiary of Lindsay Solutions. Safe Technologies may be served with process through its registered agent, Harvard Business Services, Inc. at 16192 Coastal Highway, Lewes, Delaware 19958.

8. Barrier Systems, LLC (“Barrier Systems”) is a limited liability company organized under the laws of Delaware and is a wholly owned subsidiary and/or operational unit or division of Lindsay Corp. Barrier Systems may be served at Corporation Trust Center 1209 Orange Sreet, Wilmington, Delaware 19801.

9. Lindsay Irrigation Solutions, LLC (“Lindsay Irrigation”) is a limited liability company organized under the laws of Nebraska with its principal place of business in Omaha Nebraska. Lindsay Irrigation may be served with process through its registered agent, CT Corporation System at 5601 South 59th Street, Lincoln, Nebraska 68516.

10. Upon information and belief, Lindsay Solutions, Lindsay International Holdings, Lindsay Sales, Safe Technologies, Barrier Systems, and Lindsay Irrigation are wholly-owned subsidiary, affiliates, successors of former Lindsay affiliates, operational units, and/or divisions of Lindsay Corp. (collectively “Lindsay Entities”).

11. The Lindsay Entities, develop, manufacture, test, market, promote, advertise, distribute, or sell guardrail end terminal systems throughout the United States, including the state of Missouri.

12. Valmont Industries, Inc. (“Valmont Industries”) is a corporation incorporated under the laws of Delaware with its principal place of business in Omaha, Nebraska. Valmont Industries may be served with process through its registered agent, CT Corporation System at 120 South Central Avenue, Clayton, Missouri 63105.

13. Valmont Highway Distribution Limited (“Valmont Highway”) is a foreign for-profit corporation organized and existing under the law of New Zealand, and is a wholly-owned subsidiary and/or operational unit or division of Valmont Industries, with its principal place of business in East Tamaki, Auckland, New Zealand. Valmont Highway Distribution Limited may be served at 12 Offenhauser Dr., East Tamaki, Auckland, New Zealand 2013.

14. Valmont Industries and Valmont Highway (collectively “Valmont Entities”) develop, manufacture, test, market, promote, advertise, distribute, or sell guardrail end terminal systems throughout the United States, including the state of Missouri.

JURISDICTION AND VENUE

15. This Court has personal jurisdiction over the Defendants in this matter pursuant to § 506.500. R.S.Mo. in that Defendants have transacted business within the state, have entered into contracts with Missouri entities or Missouri citizens, and have committed tortious actions within the State of Missouri.

16. This Court has subject matter jurisdiction over each of MHTC’s claims pursuant to Mo. Const. Art. V § 14.

17. Venue is proper in the Circuit Court of Cole County, pursuant to § 508.010.4, because MHTC was first injured by the Defendants’ conduct in Cole County, Missouri.

FACTS COMMON TO ALL COUNTS

18. Guardrails and guardrail end terminals are separate and distinct devices, which are purchased separately and distinctly from one another.

19. Guardrails are safety barriers which are intended to prevent a motorist from inadvertently leaving a roadway.

20. Guardrail end terminals are separate devices, which are attached to guardrails in order to prevent or reduce the risk of injury or death to vehicle occupants and others in the event that a vehicle collides with the end point of a guardrail.

21. Guardrail end terminals are designed to absorb or re-direct the kinetic energy of an errant vehicle upon impact, while preventing spearing, vaulting, rollovers, and other unintended redirections of an impacting vehicle, thereby improving motorist and passenger safety while simultaneously reducing the risk of serious injury or death to the occupants of an impacting vehicle and other motorists.

22. The X-Lite Guardrail End Terminal Tangent System ("X-Lite System") is a re-directive, gating end terminal, designed for shielding the ends of guardrail systems. The total X-Lite System consists of a head unit, specifically designed crumple posts, tension rods, a cable assembly, slider assembly, and other standard guardrail components.

23. The X-Lite System was originally designed, developed, manufactured, tested, marketed, sold, and distributed by the Valmont Entities.

24. The Valmont Entities entered into a licensing agreement with the Lindsay Entities relating to the continued development, design, production, sale, and distribution of the X-Lite System.

25. The Lindsay Entities and Valmont Entities are engaged in a joint venture related to the continued design, development production, sale, and distribution of the X-Lite System.

26. On July 18, 2013, the Lindsay Entities requested that the Missouri Department of Transportation (“MODOT”) and MHTC review and approve the X-Lite System for use on Missouri Highways.

27. On August 22, 2013 MODOT approved the X-Lite System for use as a Type A device on Missouri Highways.

28. MODOT based its approval of the X-Lite System upon NCHRP 350, Test Level 3 crash testing performed by the Lindsay Entities and a safety analysis performed by the Federal Highway Administration (“FHWA”).

29. However, the Lindsay Entities did not disclose that they used different variants of the X-Lite system during testing or that it had modified the X-Lite System design throughout the course of its testing.

30. The X-Lite System was added to MODOT’s qualified products list for contractors, subcontractors, and suppliers to use on roadway improvement projects supervised by MODOT and MHTC.

31. Contractors hired by MHTC would then select qualified products from the approved products list in order to complete their respective projects for MHTC/MODOT.

32. The Lindsay Entities marketed and sold the X-Lite System by representing that the X-Lite system was effective for re-directing the kinetic energy of an errant vehicle upon impact, while preventing spearing, vaulting, rollovers, and other unintended redirections of an impacting vehicle, thereby improving motorist and passenger safety while simultaneously reducing the risk of serious injury or death to the occupants of an impacting vehicle and other motorists.

33. X-Lite Systems were first installed on Missouri Highways beginning in June of 2014.

34. Between 2014 and 2016, X-Lite Systems were installed across the Missouri State Highway System by contractors and subcontractors working on MODOT roadway projects.

35. After the X-Lite system was installed throughout the Missouri Highway system, the X-Lite system failed to function correctly and constituted an unreasonably unsafe roadway condition on Missouri highways.

36. Specifically, MHTC first learned that the X-Lite Systems installed throughout Missouri were defective during the course of litigation captioned *Estate of George J. Jansen v. Lindsay Corporation, et al.* (Case No. 17SA-CV000698) (“Jansen Matter”).

37. The Jansen Matter involved a motor vehicle collision with a defective X-Lite System. MHTC incurred damages in the form of incurring attorney’s fees and paying a \$400,000 settlement to resolve the claims against it in the Jansen Matter.

38. The design of the X-Lite System was defective, and ineffective at preventing spearing, vaulting, rollovers, and other unintended redirections of an impacting vehicle.

39. Despite the assurances and documents submitted to the FHWA by the Lindsay Entities, the X-Lite system did not comply with the NCHRP Report 350 guidelines.

40. Following the events which gave rise to the Jansen Matter, the X-Lite System continuously failed to perform as designed, intended, and advertised during other motor vehicle collisions.

41. MHTC continues to incur damages in the form of attorney fees while litigating collateral matters arising out of X-Lite System malfunctions.

42. Malfunctions of the X-Lite system have increased the risk of serious injury or death in motor vehicle accidents. Motorists, passengers, and others have suffered property damage, serious injuries, or death across the country and within the State of Missouri because of the defective X-Lite System.

43. MHTC approved contracts to remove and replace all existing X-Lite System terminals installed across the Missouri State Highway System. A total of 655 X-Lite System installations have been removed and replaced to date.

44. To date, MHTC has removed and replaced approximately 655 X-Lite System installations throughout the Missouri Highway system.

45. MTHC has incurred approximately \$4,776,479.25 in the process of removing and replacing the X-Lite System installations across the Missouri State Highway System.

COUNT I – STRICT LIABILITY – DEFECTIVE DESIGN
(ALL DEFENDANTS)

46. MHTC hereby incorporates by reference its allegations contained in Paragraphs 1 through 45 of its Petition as if fully stated herein.

47. At all relevant times as alleged herein the Defendants or their predecessors collectively designed, marketed, and sold the X-Lite System in the regular course of their business to contractors and subcontractors for use on projects to improve Missouri Roadways.

48. At all relevant times, the X-Lite System was defective and posed an unreasonably dangerous safety hazard to the occupants of vehicles and others traveling on Missouri roadways because:

a. The Defendants failed to use due care in the design, development, manufacture, assembly, testing, and inspection of the X-Lite System;

b. The Defendants continuously modified the design of the X-Lite system throughout testing of the X-Lite system, which the Defendants used to obtain government approval, without disclosing that various portions of the testing were performed using product variations that would not be sold or used on public roadways;

c. The Defendants failed to disclose known design defects and/or that the X-Lite system would only function as advertised in narrow and specific circumstances;

d. The Defendants failed to comply with the applicable engineering standards and guidelines when they designed, manufactured, and tested the X-Lite System;

e. The Defendants concealed or misrepresented the results of testing done on the X-Lite System which showed that the X-Lite system was defective and unreasonably safe; and

f. The Defendants failed to recall the X-Lite system when it failed to perform as designed and advertised on public roadways, resulting in death or serious injuries to members of the public;

g. Specifically, the X-Lite was defective because its end treatment and supporting posts did not collapse, telescope, or retreat, nor did the bolts and attachments give way and direct the attached guardrails away from the impacting vehicle and roadway as designed and marketed, but instead allowed the attached guardrails to violently penetrate the front end of impacting vehicles

h. The defective X-Lite System did not function as advertised, intended, or designed, because it failed to prevent the end of guardrails from violently penetrating through vehicles which caused death or serious injury to the occupants of the impacting vehicle.

49. MHTC, MODOT, and their affiliate contractors and subcontractors used the X-Lite System in a reasonably anticipatable manner and in accord with its advertised purpose.

50. As a direct and proximate result of the unreasonably safe condition created by the use of the X-Lite System on Missouri Roadways, motorists and their passengers have been seriously harmed or killed in motor vehicle accidents that should not have resulted in fatalities or critical injuries.

51. As a direct and proximate result of the unreasonably safe condition created by the use of the X-Lite System, property, including the roadways and guardrails of the State of Missouri, were damaged during motor vehicle accidents.

52. The state of Missouri, MHTC, and MODOT have suffered damages to its roadways and in removing and replacing the dangerous and defective X-Lite System from public roadways.

53. The state of Missouri, MHTC, and MODOT have suffered damages litigating collateral matters arising out of motor vehicle accidents involving malfunctioning X-Lite systems.

WHEREFORE, for the reasons stated herein, MHTC prays for judgement in its favor for Count I against the Defendants, for compensatory damages in excess of \$5,176,479.25 together with all pre and post judgment interest at the maximum rate allowed by law, along with its costs incurred, including its reasonable attorneys' fees, reasonable attorney's fees incurred in collateral actions brought by third-parties, punitive damages, and any additional relief that this Court deems just and proper under the circumstances.

COUNT II – STRICT LIABILITY – FAILURE TO WARN
(ALL DEFENDANTS)

54. MHTC hereby incorporates by reference its allegations contained in Paragraphs 1 through 53 of its Petition as if fully stated herein.

55. At all relevant times as alleged herein, the Defendants designed and sold the X-Lite system in the regular course of their business.

56. At the time that Defendants marketed and sold the X-Lite system to MHTC and MODOT, as well as their contractors or subcontractors, the X-Lite system was in a defective condition and unreasonably dangerous when put to its reasonably anticipated use.

57. Defendants did not give adequate warning of the dangerous and defective conditions of the X-Lite system, but rather falsely stated that the system was effective at deflecting errant vehicles, redirecting kinetic force, and reducing the number and severity of injuries sustained in motor vehicle collisions.

58. The X-Lite system was used by MODOT, MHTC, contractors, and subcontractors, in a reasonably anticipated manner, installing these devices onto guardrail installations across the State of Missouri, unaware of the dangers posed by the defective design.

59. Had MHTC been properly warned and advised of the true operational aspects of the X-Lite system, MHTC would not have approved installation of the X-Lite terminal ends across the State of Missouri due to the increased risk of harm to motorists, passengers, and other occupants of Missouri roadways.

60. As a direct and proximate result of the defective and unreasonably safe condition that existed at the time that the X-Lite system was sold, MHTC has been damaged in that it has been required to remove and replace the X-Lite systems from all roadways across the State of Missouri in order to protect motorists and passengers thereby incurring costs to remove these unreasonably dangerous devices.

61. As a direct and proximate result of the defective and unreasonably dangerous condition as existed when the X-Lite system was sold, the X-Lite system has damaged other

property, including without limitation the roadways and guardrails of the State of Missouri, and posed a substantial risk to the general public.

62. As a direct and proximate result of the defective and unreasonably dangerous condition created by the X-Lite system, MHTC has suffered damages litigating collateral matters which arise out of motor vehicle accidents involving malfunctioning X-Lite systems.

WHEREFORE, for the reasons stated herein, MHTC prays for judgement in its favor for Count II against the Defendants, for compensatory damages in excess of \$5,176,479.25 together with all pre and post judgment interest at the maximum rate allowed by law, along with its costs incurred, including its reasonable attorneys' fees, reasonable attorney's fees incurred in collateral actions brought by third-parties, punitive damages, and any additional relief that this Court deems just and proper under the circumstances.

COUNT III – NEGLIGENCE
(ALL DEFENDANTS)

63. MHTC hereby incorporates by reference its allegations contained in Paragraphs 1 through 62 of its Petition as if fully stated herein.

64. At all relevant times as alleged herein, the Defendants designed and sold the X-Lite system in the regular course of their business.

65. At the time that Defendants collectively marketed and sold the X-Lite system to MHTC and its affiliated contractors and subcontractors, the X-Lite system contained a defective, and unreasonably dangerous condition.

66. The Defendants knew, or through the exercise of ordinary care should have known, that the design of the X-Lite system was defective and unreasonably dangerous when put to its reasonably anticipated use.

67. The Defendants had a duty to safely design a product which functioned as advertised and which would enhance the safety of motorists and their passengers rather than imperil them.

68. The Defendants had a duty to warn MHTC, MODOT, contractors, subcontractors, and the general public that the X-Lite system was defective, unreasonably safe, did not function as advertised, and increased the risk of property damage, bodily harm, and death to those involved in motor vehicle accidents.

69. The Defendants failed to safely design the X-Lite System in a manner which would allow it to function as advertised and serve as a roadway safety device which would prevent bodily harm or death to motorists and their passengers.

70. The Defendants failed to warn MHTC, MODOT, their contractors, or their subcontractors, of the aforementioned defects to the X-Lite system, or alert and/or warn MHTC, MODOT, contractors, subcontractors, or the public of the danger posed by these defects in their design.

71. MHTC, MODOT, and their affiliated contractors/subcontractors used the X-Lite system in a reasonably anticipated manner by installing these devices onto guardrail installations across the State of Missouri.

72. Had MHTC or MODOT been properly warned and advised of the true operational aspects of the X-Lite system, it would not have been installed across the State of Missouri due to the increased risk of harm to motorists, passengers, and other occupants of Missouri roadways.

73. As a direct and proximate result of the defective and unreasonably safe condition that existed at the time that the X-Lite system was sold to MHTC and its affiliated contractors and subcontractors, MHTC has been damaged in that it has been required to remove and replace the

X-Lite system devices from all roadways across the State of Missouri in order to protect Missouri motorists, thereby incurring equipment and labor costs to remove these unreasonably dangerous devices.

74. As a direct and proximate result of the defective and unreasonably dangerous condition as existed when the X-Lite system was sold, the X-Lite system has damaged other property, including without limitation the roadways and guardrails of the State of Missouri, and posed a substantial risk to the general public.

WHEREFORE, for the reasons stated herein, MHTC prays for judgement in its favor for Count III against the Defendants, for compensatory damages in excess of \$5,176,479.25 together with all pre and post judgment interest at the maximum rate allowed by law, along with its costs incurred, including its reasonable attorneys' fees, reasonable attorney's fees incurred in collateral actions brought by third-parties, punitive damages, and any additional relief that this Court deems just and proper under the circumstances.

COUNT IV – BREACH OF EXPRESS WARRANTIES
(ALL DEFENDANTS)

75. MHTC hereby incorporates by reference the allegations contained in Paragraphs 1 through 74 as if fully stated herein.

76. The Lindsay Entities expressly warranted that the X-Lite System functioned in a manner which prevented guardrail terminals from penetrating vehicles.

77. The Lindsay Entities expressly warranted that the X-Lite System would be free from defects in material or workmanship and that they would replace, free of cost, any product or component part that contained a defect.

78. The Lindsay Entities expressly warranted that the X-Lite System passed the necessary product testing to be placed on MHTC/MODOT's Qualified Product List for use by their affiliated contractors and subcontractors on roadway improvement projects.

79. The aforementioned warranties by the Lindsay Entities became part of the bargain between the Lindsay Entities, MHTC, MODOT, and their affiliated contractors/subcontractors.

80. MHTC relied upon the express warranties made by the Lindsay Entities when it placed the X-Lite System on their Qualified Project List and/or purchased X-Lite Systems for roadway improvement projects.

81. The Valmont Entities are liable for the express warranties made by the Lindsay Entities because the Valmont Entities are engaged in a joint enterprise with the Lindsay Entities relating to the design, manufacture, and sale of the X-Lite System.

82. Alternatively, MHTC and/or MODOT was a third-party beneficiary of agreements between the Lindsay Entities and contractors/subcontractors who purchased the X-Lite System for use on Missouri roadway improvement projects.

83. The X-Lite systems sold to, and ultimately installed by, MHTC, MODOT, or their affiliated contractors/subcontractors did not comply with the promises, affirmations, or express warranties made by the Lindsay Entities.

84. MHTC was damaged due to the failure of the X-Lite system to conform with the express warranties made by the Lindsay Entities in that MHTC has incurred significant expense in order to remove and replace the X-Lite system across the Missouri's State Highway System.

85. As a direct and proximate result of the Defendants' breached warranties, MHTC has incurred approximately \$4,776,479.25 in damages to date removing X-Lite System

installations across the State of Missouri. MHTC has also suffered other damages making repairs to its roadways.

86. As a direct and proximate result of the Defendants' breached warranties, MHTC has suffered damages litigating collateral matters which arise out of motor vehicle accidents involving malfunctioning X-Lite systems.

WHEREFORE, for the reasons stated herein, MHTC prays for judgement in its favor for Count IV against the Defendants, for compensatory damages in excess of \$5,176,479.25 together with all pre and post judgment interest at the maximum rate allowed by law, along with its costs incurred, including its reasonable attorneys' fees, reasonable attorney's fees incurred in collateral actions brought by third-parties, punitive damages, and any additional relief that this Court deems just and proper under the circumstances.

COUNT V – BREACH OF IMPLIED WARRANTY OF MERCHANTABILITY
(ALL DEFENDANTS)

87. MHTC hereby incorporates by reference its allegations contained in Paragraphs 1 through 86 of its Petition as if fully stated herein.

88. The Defendants designed, manufactured, and sold the X-Lite system to MHTC, MODOT, or their affiliated contractors/subcontractors for use on the Missouri State Highway System.

89. R.S.Mo. § 400.2-314 creates an implied warranty that goods are fit for the ordinary purposes for which the goods are used.

90. Guardrail end terminals like the X-Lite System are ordinarily used and designed for the purpose of being attached to guardrails in order to prevent or reduce the risk of injury or death to vehicle occupants and others in the event that a vehicle collides with the end point of a guardrail.

91. Guardrail end terminals like the X-Lite system are ordinarily used to absorb or redirect the kinetic energy of an errant vehicle upon impact, while preventing spearing, vaulting, rollovers, and other unintended redirections of an impacting vehicle, thereby improving motorist and passenger safety while simultaneously reducing the risk of serious injury or death to the occupants of an impacting vehicle and other motorists.

92. The X-Lite System, manufactured and sold by the Defendants was not fit for the ordinary purpose for which such goods are used, specifically:

a. The X-Lite system sold to MHTC, MODOT, or their affiliated contractors/subcontractors did not improve the safety of Missouri motorists or passengers;

b. The X-Lite system sold to MHTC, MODOT, or their affiliated contractors/subcontractors did not reduce the kinetic energy of impacting errant vehicles as marketed, sold, and intended;

c. The X-Lite system sold to MHTC, MODOT, or their affiliated contractors/subcontractors increased, rather than decreased, the severity of collisions with guardrails across the State of Missouri; and

d. The X-Lite system sold to MHTC, MODOT, or their affiliated contractors/subcontractors increased, rather than decreased, the chance of property damage, personal injury, and death to impacting motorists and passengers.

93. As a direct and proximate result of the Defendants' breached warranties, MHTC has incurred damages removing and replacing the defective X-Lite system from Missouri roadways. MHTC has also suffered damages making other repairs to its roadways.

94. As a direct and proximate result of the Defendants' breached warranties, MHTC has suffered damages litigating collateral matters which arise out of motor vehicle accidents involving malfunctioning X-Lite systems.

WHEREFORE, for the reasons stated herein, MHTC prays for judgement in its favor for Count V against the Defendants, for compensatory damages in excess of \$5,176,479.25 together with all pre and post judgment interest at the maximum rate allowed by law, along with its costs incurred, including its reasonable attorneys' fees, reasonable attorney's fees incurred in collateral actions brought by third-parties, punitive damages, and any additional relief that this Court deems just and proper under the circumstances.

**COUNT VI – BREACH OF IMPLIED WARRANTY
OF FITNESS FOR A PARTICULAR PURPOSE
(ALL DEFENDANTS)**

95. MHTC hereby incorporates by reference its allegations contained in Paragraphs 1 through 94 of its Petition as if fully stated herein.

96. R.S.Mo. § 400.2-315 creates an implied warranty in any sale of goods that a good will be fit for a particular purpose when the seller knows that the buyer is relying on the seller's skill or judgment in selecting a particular good for a particular purpose.

97. MHTC and MODOT relied on the Defendants skill and judgment when they approved the X-Lite System for use on Missouri Roadways and placed the X-Lite system on their Qualified Product List.

98. The Defendants knew that MHTC and MODOT had certain standards which qualified products for use on Missouri roadways including the standards tested through NCHRP 350 crash testing.

99. The Defendants warranted that the X-Lite system was fit for the particular purpose of absorbing or re-directing the kinetic energy of an errant vehicle upon impact, while preventing spearing, vaulting, rollovers, and other unintended redirections of an impacting vehicle, thereby improving motorist and passenger safety while simultaneously reducing the risk of serious injury or death to the occupants of an impacting vehicle and other motorists.

100. Alternatively, MHTC and MODOT were third party beneficiaries of the contracts in which Defendants sold X-Lite systems to MHTC/MODOT's affiliated contractors/subcontractors for use on Missouri roadway improvement projects.

101. The X-Lite System, manufactured and sold by the Defendants was not fit for the particular purpose it was purchased, specifically:

a. The X-Lite system sold to MHTC, MODOT, or their affiliated contractors/subcontractors did not improve the safety of Missouri motorists or passengers;

b. The X-Lite system sold to MHTC, MODOT, or their affiliated contractors/subcontractors did not reduce the kinetic energy of impacting errant vehicles as marketed, sold, and intended;

c. The X-Lite system sold to MHTC, MODOT, or their affiliated contractors/subcontractors increased, rather than decreased, the severity of collisions with guardrails across the State of Missouri; and

d. The X-Lite system sold to MHTC, MODOT, or their affiliated contractors/subcontractors increased, rather than decreased, the chance of property damage, personal injury, and death to impacting motorists and passengers.

102. As a direct and proximate result of the Defendants' breached warranties, MHTC has incurred damages removing and replacing the defective X-Lite system from Missouri roadways. MHTC has also suffered damages making other repairs to its roadways.

103. As a direct and proximate result of the Defendants' breached warranties, MHTC has suffered damages litigating collateral matters which arise out of motor vehicle accidents involving malfunctioning X-Lite systems.

WHEREFORE, for the reasons stated herein, MHTC prays for judgement in its favor for Count VI against the Defendants, for compensatory damages in excess of \$5,176,479.25 together with all pre and post judgment interest at the maximum rate allowed by law, along with its costs incurred, including its reasonable attorneys' fees, reasonable attorney's fees incurred in collateral actions brought by third-parties, punitive damages, and any additional relief that this Court deems just and proper under the circumstances.

COUNT VII – FRAUD
(ALL DEFENDANTS)

104. MHTC hereby incorporates by reference its allegations contained in Paragraphs 1 through 103 of its Petition as if fully stated herein.

105. The Defendants represented to MHTC and/or MODOT that the X-Lite Systems sold for use on Missouri roadways were consistent with the same variants of the X-Lite system which satisfied NCHRP 350 crash testing and the Federal Highway Administration's safety standards.

106. The NCHRP 350 crash testing was conducted, at least in part, by Safe Technologies, which at all relevant times was a fully owned subsidiary of Lindsay Corp.

107. Safe Technologies had a conflict of interest in testing the X-Lite System and issuing its findings regarding the X-Lite System's compliance with the NCHRP 350 standards.

108. The Defendants did not disclose that testing of the X-Lite system was performed by an affiliated corporate entity with a conflict of interest.

109. Upon information and belief, the Defendants continuously modified the X-Lite System throughout the course of the applicable NCHRP 350 testing but did not disclose to MHTC or MODOT that the X-Lite System which would ultimately be installed on Missouri Roadways varied in design.

110. The Defendants misrepresented the results of the NCHRP 350 crash testing for the purpose of making prospective purchasers believe that the X-Lite System functioned safely and as designed.

111. The Defendants requested that the X-Lite System be placed on MHTC and MODOT's Qualified Products List using the aforementioned misrepresentations and omissions with the intent that MODOT and/or MHTC would approve the X-Lite System for use on Missouri roadways and that it would thereafter sell X-Lite Systems to MHTC, MODOT, contractors, and subcontractors for use on Missouri roadway improvement projects.

112. Upon information and belief, the Defendants misrepresented information regarding the X-Lite system for the purpose of increasing their sales and generating revenue without regard for the safety or wellbeing of the public.

113. In reliance on the Defendants misrepresentations, MHTC and MODOT place the X-Lite System on their Qualified Product List which resulted in the X-Lite System being used on a number of roadway improvement projects throughout Missouri.

114. At all relevant times, the Defendants knew that the X-Lite System would not function as they warranted, advertised, or represented.

115. But for Defendants' misrepresentations, the X-Lite System would never have been approved for use on Missouri Roadways.

116. MHTC suffered damages as a result of the Defendants' misrepresentations by replacing the X-Lite Systems which have been installed on Missouri roadways to remedy the unreasonably dangerous condition created by the defective X-Lite Systems.

WHEREFORE, for the reasons stated herein, MHTC prays for judgement in its favor for Count VII against the Defendants, for compensatory damages in excess of \$5,176,479.25 together with all pre and post judgment interest at the maximum rate allowed by law, along with its costs incurred, including its reasonable attorneys' fees, reasonable attorney's fees incurred in collateral actions brought by third-parties, punitive damages, and any additional relief that this Court deems just and proper under the circumstances.

COUNT VIII – PUBLIC NUISANCE
(ALL DEFENDANTS)

117. MHTC hereby incorporates by reference its allegations contained in Paragraphs 1 through 116 of its Petition as if fully stated herein.

118. The X-Lite System was dangerous and defectively designed because it failed to prevent guardrails from violently penetrating impacting vehicles causing serious bodily harm to motorists and their passengers.

119. The installation of X-Lite Systems across Missouri roadways constituted an interference with the rights of the public at large to freely and safely use the Missouri roadways.

120. The presence of the X-Lite System on Missouri roadways constituted a hazard to motorists and passengers who were travelling upon Missouri Roadways.

121. The X-Lite System's presence on Missouri roadways constituted a public nuisance because of the unreasonably safe condition it created on Missouri Roadways and the increased risk that motorists and passengers would suffer severe injuries or death in motor vehicle accidents.

122. Consistent with their lawful purpose, MHTC and MODOT abated the public nuisance caused by the defective X-Lite System by replacing the X-Lite Systems that had been installed on public roadways.

123. As a direct and proximate cause of the public nuisance created by the X-Lite System, MHTC suffered damages in the form of property damage, litigation costs, and remediation costs.

WHEREFORE, for the reasons stated herein, MHTC prays for judgement in its favor for Count VII against the Defendants, for compensatory damages in excess of \$5,176,479.25 together with all pre and post judgment interest at the maximum rate allowed by law, along with its costs incurred, including its reasonable attorneys' fees, reasonable attorney's fees incurred in collateral actions brought by third-parties, punitive damages, and any additional relief that this Court deems just and proper under the circumstances.

BATY OTTO CORONADO PC

/s/ Theresa A. Otto

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 ATTORNEYS FOR PLAINTIFF

EXHIBIT E



THE UNITED STATES ATTORNEY'S OFFICE
MIDDLE DISTRICT *of* TENNESSEE

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Department of Justice

U.S. Attorney's Office

Middle District of Tennessee

FOR IMMEDIATE RELEASE

Thursday, July 25, 2013

Sherman-Dixie Concrete Industries, Inc. To Pay \$664,000 To Settle False Claims Act Allegations

Sherman-Dixie Concrete Industries, Inc. has agreed to pay the United States \$664,581.23 to settle False Claims Act allegations, announced David Rivera, Acting United States Attorney for the Middle District of Tennessee.

The settlement resolves allegations that Sherman-Dixie submitted false claims for payment to the United States for products that did not meet required specifications. These products included concrete end walls and catch basins that are typically used in and adjacent to roadway construction.

The United States alleged that Sherman-Dixie submitted these claims after repeatedly certifying that its products were in reasonable compliance and were produced pursuant to applicable procedures. The investigation found however, that many of the products did not meet specifications as they related to the strength and placement of rebar within the pre-cast products. Although Sherman-Dixie provided these products for projects primarily administered by the Tennessee Department of Transportation, a substantial portion of the funding for these projects was provided by the United States through the Federal Highway Administration, an agency within the U.S. Department of Transportation ("DOT").

"Enforcement of the False Claims Act remains a top priority of the Department of Justice and this office," said Acting U.S. Attorney David Rivera. "This enforcement effort extends to all attempts to procure funds from the United States and its agencies by false pretenses. The U.S. Attorney's Office for the Middle District of Tennessee will continue to devote the resources necessary to vigorously protect taxpayers' interests and aggressively pursue fraud, waste, and abuse."

"The settlement announced today sends a strong message to those that would seek to substitute inferior products in transportation-related projects," said DOT- OIG Regional Special Agent- in- Charge Marlies Gonzalez. "We will leave no stone unturned to ensure the safety of the nation's transportation system. DOT- OIG remains committed to working with our law enforcement and prosecutorial colleagues, and other federal and state partners to prevent and detect waste, fraud, and abuse."

The federal investigation corroborated conduct originally discovered by the Tennessee Department of Transportation. An efficient and thorough investigation allowed a resolution to be achieved without filing a complaint, conserving judicial resources and government funds. In addition to the monetary payment, Sherman-Dixie has entered into a monitoring agreement with the U.S. Department of Transportation, Federal Highway Administration. This monitoring agreement will require Sherman-Dixie to take certain compliance measures to reduce the likelihood of future violations of the False Claims Act and other procurement regulations.

This matter was investigated by the U.S. Department of Transportation, the FBI and the United States Attorney's Office for the Middle District of Tennessee. The United States was represented by Assistant U.S. Attorney Christopher C. Sabis.

Component(s):

[USAO - Tennessee, Middle](#)

Updated March 19, 2015

EXHIBIT F

SETTLEMENT AGREEMENT

This Settlement Agreement (Agreement) is entered into among the United States of America, acting through the United States Department of Justice and on behalf of the Federal Highway Administration ("FHWA"), an operating administration of the U.S. Department of Transportation (collectively the "United States"), and Dave O'Mara Contractor, Inc., Padgett Trucking, Inc., Dave O'Mara Paving, Inc., David J. O'Mara, Nancy A. O'Mara, Amy L. Boswell, Robert L. O'Mara and Daniel J. O'Mara (hereafter collectively referred to as "the Parties"), through their authorized representatives.

RECITALS

A. Dave O'Mara Contractor, Inc. ("DOCI") is a construction company with its principal place of business in North Vernon, Indiana. Its specialties include highway construction, asphalt paving construction and exterior concrete construction. It frequently enters into contracts with the Indiana Department of Transportation ("INDOT") to pave roads, including roads that are ultimately funded in large part by the federal government through the FHWA.

B. Padgett Trucking, Inc. and Dave O'Mara Paving, Inc. (hereafter, "DOCI Affiliates") are affiliates of DOCI that also have their principal place of business in North Vernon, Indiana. Padgett Trucking, Inc. provides trucking services and Dave O'Mara Paving, Inc. manages asphalt plants. Both of these entities are agreeing in this settlement agreement to pay a portion of the settlement amount owed to the United States (and guaranteed to be paid by their affiliate, DOCI), in order to reduce DOCI's obligations to the United States.

C. David J. O'Mara, Nancy A. O'Mara, Amy L. Boswell, Robert L. O'Mara and Daniel J. O'Mara (hereafter collectively referred to as the "DOCI Shareholders") are individuals who reside in the state of Indiana. All of these individuals are shareholders of DOCI and all are agreeing in this settlement agreement to pay a portion of the settlement amount owed to the United States (and guaranteed to be paid by DOCI), in order to reduce DOCI's obligations to the United States.

D. The United States maintains that it has civil claims against DOCI arising from the Covered Conduct as defined below.

E. The United States contends that DOCI caused claims for payment to be submitted by INDOT to the FHWA in connection with the paving of roads, pursuant to contracts into which DOCI entered with INDOT.

F. The United States contends that from February 6, 2008 to December 10, 2014, DOCI caused the submission of false and fraudulent claims to FHWA in connection with the paving of highways and other roads that were funded by both federal and state money. Specifically, DOCI knowingly made misrepresentations to INDOT in seeking payments for its road paving services, thereby causing INDOT to request and obtain payment from FHWA for the federal share of the work done on those roadways. DOCI represented that its hot mix asphalt mixture met INDOT's required minimum amount of binder or glue that would hold the mix together when, in fact, DOCI frequently failed to meet such minimum levels for the base and intermediate levels of asphalt in the roads it paved. DOCI was able to mislead the government by reporting to INDOT that it was using slag – an especially heavy mineral – in situations where no material amounts of slag was used, thereby creating the impression that its mixture was

heavier than it really was and required less binder than the roads truly needed to make them last a reasonable period of time before which they would develop cracks and become unsafe to drive on. The conduct described in this Paragraph and in Paragraph E is collectively referred to below as the Covered Conduct.

G. This Settlement Agreement is neither an admission of liability by DOCI nor a concession by the United States that its claims are not well founded.

H. To avoid the delay, uncertainty, inconvenience, and expense of protracted litigation of the above claims, and in consideration of the mutual promises and obligations of this Settlement Agreement, the Parties agree and covenant as follows:

TERMS AND CONDITIONS

1. DOCI shall pay and/or guarantee the payment to the United States of four million two hundred fifty two thousand seven hundred thirty six dollars (\$4,252,736.00) (Settlement Amount), which constitutes restitution to the United States, by electronic funds transfer pursuant to written instructions to be provided by the Office of the United States Attorney for the Southern District of Indiana. The payments shall be made as follows:

a. Pursuant to a promissory note in the form attached hereto as Exhibit A, DOCI shall make five equal payments of one hundred eighty one thousand three hundred seventeen dollars and seventy eight cents (\$181,317.78) per payment – for a total for the five payments of nine hundred six thousand five hundred eighty eight dollars and ninety cents (\$906,588.90). The first such payment shall be due no later than ten days after the Effective Date of this Agreement, and the remaining four payments shall be due precisely 12, 24, 36 and 48 months, respectively, after the due date of the initial payment.

b. Pursuant to a promissory note in the form attached hereto as Exhibit B, each of the five O'Mara Shareholders shall make five equal payments of seventy nine thousand four hundred fifty dollars and fifty five cents (\$79,450.55) – for a total for the five payments of three hundred ninety seven thousand two hundred fifty two dollars and seventy five cents (\$397,252.75) per shareholder, or one million nine hundred eighty six thousand two hundred sixty three dollars and seventy five cents (\$1,986,263.75) for the DOCI Shareholders taken in the aggregate. For each of the DOCI Shareholders, the first such payment shall be due no later than ten days after the Effective Date of this Agreement, and the remaining four payments shall be due precisely 12, 24, 36 and 48 months, respectively, after the due date of the initial payment. The DOCI Shareholders shall be jointly and severally liable for the full amount owed by all five of the DOCI Shareholders, and each DOCI Shareholder hereby agrees to make any payment required of any of the other DOCI Shareholders under this subparagraph if that payment is not made when due. In addition, pursuant to a guarantee in the form attached hereto as Exhibit C, DOCI guarantees to make any payment required by this subparagraph if the payment is not made when due.

c. Pursuant to a promissory note in the form attached hereto as Exhibit D (the "DOCI Affiliates' Note"), Padgett Trucking, Inc., shall make five equal payments of one hundred fifty eight thousand six hundred fifty three dollars and six cents (\$158,653.06) – for a total for the five payments of seven hundred ninety three thousand two hundred sixty five dollars and thirty cents (\$793,265.30). Moreover, pursuant to the DOCI Affiliates' Note, Dave O'Mara Paving, Inc. shall make five equal payments of one hundred thirteen thousand three hundred twenty three dollars and sixty one cents

(\$113,323.61) – for a total for the five payments of five hundred sixty six thousand six hundred eighteen dollars and five cents (\$566,618.05). The aggregate amount to be paid by these two DOCI Affiliates shall be one million three hundred fifty nine thousand eight hundred eighty three dollars and thirty five cents (\$1,359,883.35). For each of the DOCI Affiliates, the first required payment shall be due no later than ten days after the Effective Date of this Agreement, and the remaining four payments shall be due precisely 12, 24, 36 and 48 months, respectively, after the due date of the initial payment. The DOCI Affiliates shall be jointly and severally liable for the full amount owed by both of the DOCI Affiliates, and each DOCI Affiliate hereby agrees to make any payment required of any of the other DOCI Affiliates under this subparagraph if that payment is not made when due. Similarly, pursuant to the guarantee attached hereto as Exhibit E, DOCI guarantees to make any payment required by this subparagraph if the payment is not made when due.

d. The payment obligations undertaken by the DOCI Shareholders shall be partially secured by a letter of credit in the amount of seven hundred fifty thousand dollars (\$750,000.00), in the form of Exhibit F, which the DOCI Shareholders agree to cause to be issued contemporaneously with this Settlement Agreement. In addition, the payment obligations undertaken by the DOCI Affiliates shall be partially secured by a letter of credit in the amount of six hundred thousand dollars (\$600,000.00) in the form of Exhibit G, which the DOCI Affiliates agree to cause to be issued contemporaneously with this Settlement Agreement.

e. The Settlement Amount represents the amount the United States is willing to accept in compromise of its civil claims arising from the Covered Conduct due

solely to DOCI's financial condition as reflected in the Financial Statements referenced in Paragraph 4 below.

(1) In the event that the United States does not receive any of the payments required by Subparagraphs 1.a through 1.c when due, or in the event that either the DOCI Shareholders or the DOCI Affiliates fail to maintain the respective letter of credit referenced in Subparagraph 1.d on the terms set forth in that Subparagraph throughout the time that (i) money is available to be drawn on that respective letter of credit and (ii) they continue to have payment obligations to the United States pursuant to this Settlement Agreement, DOCI shall be in Default of DOCI's payment obligations ("Default"). The United States shall provide written Notice of Default, and both DOCI and/or whichever other individual or entity who failed to make the required payment or maintain the required letter of credit shall have an opportunity to cure such Default within fourteen (14) calendar days from the date of receipt of the Notice of Default by making the payment due. Notice of Default will be delivered to DOCI, or to such other representative as DOCI shall designate in advance, in writing. If DOCI and/or whichever other individual or entity caused the Default fail to cure the Default within fourteen (14) days of DOCI's receipt of the Notice of Default and in the absence of an agreement with the United States to a modified payment schedule ("Uncured Default"), the remaining unpaid balance of the Settlement Amount shall become immediately due and payable by DOCI, and interest on the remaining unpaid balance shall thereafter accrue at the rate of 12% per annum, compounded daily from the date of Default, on the remaining unpaid total. The DOCI Shareholders and DOCI Affiliates shall retain whatever payment obligations they undertook pursuant to Paragraphs 1.b. and 1.c., provided that to the

extent the United States recovers any money in satisfaction of those payment obligations pursuant to Subparagraph 1.d, those obligations shall be reduced accordingly.

(2) In the event of Uncured Default, DOCI agrees that the United States, at its sole discretion, may (i) retain any payments previously made, rescind this Agreement and bring any civil and/or administrative claim, action, or proceeding against DOCI for the claims that would otherwise be covered by the releases provided in Paragraph 2 below, with any recovery reduced by the amount of any payments previously made by DOCI or any of the DOCI Affiliates or Shareholders to the United States under this Agreement or recoverable under Subparagraph 1.d; (ii) take any action to enforce this Agreement in a new action; (iii) offset the remaining unpaid balance from any amounts due and owing to DOCI and or affiliated companies by any department, agency, or agent of the United States at the time of Default or subsequently; and/or (iv) exercise any other right granted by law, or under the terms of this Agreement, or recognizable at common law or in equity. The United States shall be entitled to any other rights granted by law or in equity by reason of Default, including referral of this matter for private collection. In the event the United States pursues a collection action, DOCI agrees that it will immediately pay the United States the greater of (i) a ten-percent (10%) surcharge of the amount collected, as allowed by 28 U.S.C. § 3011(a), or (ii) the United States' reasonable attorneys' fees and expenses incurred in such an action. In the event that the United States opts to rescind this Agreement pursuant to this Paragraph, DOCI waives and agrees not to plead, argue, or otherwise raise any defenses under the theories of statute of limitations, laches, estoppel or similar theories, to any civil or administrative claims that (i) are filed by the United States within 120 calendar days of written notification to DOCI

that this Agreement has been rescinded, and (ii) relate to the Covered Conduct, except to the extent these defenses were available on April 9, 2018. DOCI agrees not to contest any offset, recoupment, and/or collection action undertaken by the United States pursuant to this Paragraph, either administratively or in any state or federal court, except on the grounds of actual payment to the United States.

2. Subject to the exceptions in Paragraph 3 (concerning reserved claims) below, and subject to Paragraph 4 (concerning disclosure of assets), Subparagraph 1.e. (concerning default), and Paragraph 10 (concerning bankruptcy) below, and upon the United States' receipt of the Settlement Amount, the United States releases DOCI, together with its current and former parent corporations; direct and indirect subsidiaries; brother or sister corporations; divisions; current or former owners insofar as they are corporations rather than individuals; and the corporate successors and assigns of any of them from any civil or administrative monetary claim the United States has for the Covered Conduct under the False Claims Act, 31 U.S.C. §§ 3729-3733; the Program Fraud Civil Remedies Act, 31 U.S.C. §§ 3801-3812; or the common law theories of breach of contract, payment by mistake, unjust enrichment, and fraud.

3. Notwithstanding the releases given in Paragraph 2 of this Agreement, or any other term of this Agreement, the following claims of the United States are specifically reserved and are not released:

- a. Any liability arising under Title 26, U.S. Code (Internal Revenue Code);
- b. Any criminal liability;

- c. Except as explicitly stated in this Agreement, any administrative liability, including the suspension and debarment rights of any federal agency;
- d. Any liability to the United States (or its agencies) for any conduct other than the Covered Conduct;
- e. Any liability based upon obligations created by this Agreement;
- f. Any liability of individuals;
- g. Any liability for express or implied warranty claims or other claims for defective or deficient products or services, including quality of goods and services; and
- h. Any liability for personal injury or property damage or for other consequential damages arising from the Covered Conduct.

4. DOCI has provided sworn financial disclosure statements (Financial Statements) to the United States and the United States has relied on the accuracy and completeness of those Financial Statements in reaching this Agreement. DOCI warrants that the Financial Statements are complete, accurate, and current. If the United States learns of asset(s) in which DOCI had an interest of any kind at the time of this Agreement (including, but not limited to, promises by insurers or other third parties to satisfy DOCI's obligations under this Agreement) that were not disclosed in the Financial Statements, or if the United States learns of any misrepresentation by DOCI on, or in connection with, the Financial Statements, and if such nondisclosure or misrepresentation changes the estimated net worth set forth in the Financial Statements by \$200,000 or more, the United States may at its option: (a) rescind this Agreement and file suit based

on the Covered Conduct, or (b) collect the full Settlement Amount in accordance with the Agreement plus one hundred percent (100%) of the value of the net worth of DOCI's previously undisclosed assets. DOCI agrees not to contest any collection action undertaken by the United States pursuant to this provision, and agrees that it will immediately pay the United States the greater of (i) a ten-percent (10%) surcharge of the amount collected in the collection action, as allowed by 28 U.S.C. § 3011(a), or (ii) the United States' reasonable attorneys' fees and expenses incurred in such an action. In the event that the United States, pursuant to this paragraph rescinds this Agreement, DOCI waives and agrees not to plead, argue, or otherwise raise any defenses under the theories of statute of limitations, laches, estoppel or similar theories, to any civil or administrative claims that (a) are filed by the United States within 120 calendar days of written notification to DOCI that this Agreement has been rescinded, and (b) relate to the Covered Conduct, except to the extent these defenses were available on April 9, 2018.

5. In the event that the United States, pursuant to Paragraph 4 (concerning disclosure of assets), above, opts to rescind this Agreement, DOCI agrees not to plead, argue, or otherwise raise any defenses under the theories of statute of limitations, laches, estoppel, or similar theories, to any civil or administrative claims that (a) are filed by the United States within 120 calendar days of written notification to DOCI that this Agreement has been rescinded, and (b) relate to the Covered Conduct, except to the extent these defenses were available on April 9, 2018.

6. DOCI waives and shall not assert any defenses DOCI may have to any criminal prosecution or administrative action relating to the Covered Conduct that may be based in whole or in part on a contention that, under the Double Jeopardy Clause in the

Fifth Amendment of the Constitution, or under the Excessive Fines Clause in the Eighth Amendment of the Constitution, this Agreement bars a remedy sought in such criminal prosecution or administrative action.

7. DOCI fully and finally releases the United States, its agencies, officers, agents, employees, and servants, from any claims (including attorney's fees, costs, and expenses of every kind and however denominated) that DOCI has asserted, could have asserted, or may assert in the future against the United States, its agencies, officers, agents, employees, and servants, related to the Covered Conduct and the United States' investigation and prosecution thereof.

8. a. Unallowable Costs Defined: All costs (as defined in the Federal Acquisition Regulation, 48 C.F.R. § 31.205-47) incurred by or on behalf of DOCI, and its present or former officers, directors, employees, shareholders, and agents in connection with:

- (1) the matters covered by this Agreement;
- (2) the United States' audit(s) and civil investigation(s) of the matters covered by this Agreement;
- (3) DOCI's investigation, defense, and corrective actions undertaken in response to the United States' audit(s) and civil investigation(s) in connection with the matters covered by this Agreement (including attorney's fees);
- (4) the negotiation and performance of this Agreement; and
- (5) the payment DOCI makes to the United States pursuant to this Agreement and any payments that the DOCI Affiliates

or Shareholders make to the United States pursuant to this Agreement

are unallowable costs for government contracting purposes (hereinafter referred to as Unallowable Costs).

b. Future Treatment of Unallowable Costs: Unallowable Costs will be separately determined and accounted for by DOCI, and DOCI shall not charge such Unallowable Costs directly or indirectly to any contract with the United States.

c. Treatment of Unallowable Costs Previously Submitted for Payment: Within 90 days of the Effective Date of this Agreement, DOCI shall identify and repay by adjustment to future claims for payment or otherwise any Unallowable Costs included in payments previously sought by DOCI or any of its subsidiaries or affiliates from the United States. DOCI agrees that the United States, at a minimum, shall be entitled to recoup from DOCI any overpayment plus applicable interest and penalties as a result of the inclusion of such Unallowable Costs on previously-submitted requests for payment. The United States, including the Department of Justice and/or the affected agencies, reserves its rights to audit, examine, or re-examine DOCI's books and records and to disagree with any calculations submitted by DOCI or any of its subsidiaries or affiliates regarding any Unallowable Costs included in payments previously sought by DOCI, or the effect of any such Unallowable Costs on the amount of such payments.

9. DOCI agrees to cooperate fully and truthfully with the United States' investigation of individuals and entities not released in this Agreement. Upon reasonable notice, DOCI shall encourage, and agrees not to impair, the cooperation of its directors,

officers, and employees, and shall use its best efforts to make available, and encourage, the cooperation of former directors, officers, and employees for interviews and testimony, consistent with the rights and privileges of such individuals. DOCI further agrees to furnish to the United States, upon request, complete and unredacted copies of all non-privileged documents, reports, memoranda of interviews, and records in its possession, custody, or control concerning any investigation of the Covered Conduct that it has undertaken, or that has been performed by another on its behalf.

10. In exchange for valuable consideration provided in this Agreement, DOCI acknowledges the following:

a. DOCI warrants that it has reviewed its financial situation and that it currently is solvent within the meaning of 11 U.S.C. §§ 547(b)(3) and 548(a)(1)(B)(ii)(I), and shall remain solvent following payment to the United States of the Settlement Amount.

b. In evaluating whether to execute this Agreement, the Parties intend that the mutual promises, covenants, and obligations set forth herein constitute a contemporaneous exchange for new value given to DOCI, within the meaning of 11 U.S.C. § 547(c)(1), and the Parties conclude that these mutual promises, covenants, and obligations do, in fact, constitute such a contemporaneous exchange.

c. The mutual promises, covenants, and obligations set forth herein are intended by the Parties to, and do in fact, constitute a reasonably equivalent exchange of value.

d. The Parties do not intend to hinder, delay, or defraud any entity to which DOCI was or became indebted to on or after the date of any transfer contemplated in this Agreement, within the meaning of 11 U.S.C. § 548(a)(1).

e. If DOCI's obligations under this Agreement are avoided for any reason (including but not limited to, through the exercise of a trustee's avoidance powers under the Bankruptcy Code), or if, before the Settlement Amount is paid in full, DOCI or a third party commences a case, proceeding, or other action under any law relating to bankruptcy, insolvency, reorganization, or relief of debtors seeking any order for relief of DOCI's debts, or to adjudicate DOCI as bankrupt or insolvent; or seeking appointment of a receiver, trustee, custodian, or other similar official for DOCI or for all or any substantial part of DOCI's assets:

(1) The United States may rescind the releases in this Agreement and bring any civil and/or administrative claim, action, or proceeding against DOCI for the claims that would otherwise be covered by the releases provided in Paragraph 2 above;

(2) The United States has an undisputed, non-contingent, and liquidated allowed claim against DOCI in the amount of twenty three million five hundred thousand dollars (\$23,500,000), less any payment received pursuant to this Agreement, provided, however, that such payments are not otherwise avoided and recovered from the United States by DOCI, a receiver, trustee, custodian, or other similar official for DOCI; and

(3) DOCI agrees that any civil and/or administrative claim, action, or proceeding brought by the United States under this Paragraph is not subject to

an "automatic stay" pursuant to 11 U.S.C. § 362(a) because it would be an exercise of the United States' police and regulatory power. DOCI shall not argue or otherwise contend that the United States' claims, actions, or proceedings are subject to an automatic stay and, to the extent necessary, consents to relief from the automatic stay for cause under 11 U.S.C. § 362(d)(1). DOCI waives and shall not plead, argue, or otherwise raise any defenses under the theories of statute of limitations, laches, estoppel, or similar theories, to any such civil or administrative claims, actions, or proceeding that are brought by the United States within one hundred twenty (120) calendar days of written notification to DOCI that the releases have been rescinded pursuant to this Paragraph, except to the extent such defenses were available on April 9, 2018.

11. This Agreement is intended to be for the benefit of the Parties only.

12. Each Party shall bear its own legal and other costs incurred in connection with this matter, including the preparation and performance of this Agreement.

13. Each party and signatory to this Agreement represents that it freely and voluntarily enters in to this Agreement without any degree of duress or compulsion.

14. This Agreement is governed by the laws of the United States. The exclusive jurisdiction and venue for any dispute relating to this Agreement is the United States District Court for the Southern District of Indiana. For purposes of construing this Agreement, this Agreement shall be deemed to have been drafted by all Parties to this Agreement and shall not, therefore, be construed against any Party for that reason in any subsequent dispute.

15. This Agreement constitutes the complete agreement between the Parties. This Agreement may not be amended except by written consent of the Parties.

Forbearance by the United States from pursuing any remedy or relief available to it under this Agreement shall not constitute a waiver of rights under this Agreement.

16. The undersigned counsel represent and warrant that they are fully authorized to execute this Agreement on behalf of the persons and entities indicated below.

17. This Agreement may be executed in counterparts, each of which constitutes an original and all of which constitute one and the same Agreement.

18. This Agreement is binding on DOCI's, the DOCI Affiliates' and the DOCI Shareholders' successors, transferees, heirs, and assigns.

19. All parties consent to the United States' disclosure of this Agreement, and information about this Agreement, to the public.

20. This Agreement is effective on the date of signature of the last signatory to the Agreement (Effective Date of this Agreement). Facsimiles of signatures shall constitute acceptable, binding signatures for purposes of this Agreement.

THE UNITED STATES OF AMERICA

DATED: September 10, 2020

BY: Daniel A. Spiro
Daniel A. Spiro
Senior Trial Counsel
Commercial Litigation Branch
Civil Division
United States Department of Justice

DATED: September 8, 2020

BY: Rachana N. Fischer
Rachana N. Fischer
Assistant United States Attorney
Southern District of Indiana

DAVE O'MARA CONTRACTOR, INC.

DATED: September 8, 2020 BY: David J. O'Mara
David J. O'Mara
President

DATED: September 8, 2020 BY: _____
Marc S. Murphy
Counsel for Dave O'Mara Contractor, Inc.

PADGETT TRUCKING, INC.

DATED: September 8, 2020 BY: David J. O'Mara
David J. O'Mara
President

DAVE O'MARA PAVING, INC.

DATED: September 8, 2020 BY: Daniel J. O'Mara
Daniel J. O'Mara
Vice President

SHAREHOLDERS

DATED: September 8, 2020 David J. O'Mara
David J. O'Mara

DATED: September 8, 2020 Nancy A. O'Mara
Nancy A. O'Mara

DATED: September 8, 2020 Amy L. Boswell
Amy L. Boswell

DATED: September 8, 2020 Robert L. O'Mara
Robert L. O'Mara

DATED: September 8, 2020 Daniel J. O'Mara
Daniel J. O'Mara

EXHIBIT G



THE UNITED STATES ATTORNEY'S OFFICE
DISTRICT *of* MINNESOTA

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Department of Justice

U.S. Attorney's Office

District of Minnesota

FOR IMMEDIATE RELEASE

Friday, June 4, 2021

Mark Sand & Gravel Co. To Pay \$1.75 Million For Allegedly Using Substandard, Unauthorized Road Construction Materials In Violation Of Federal And State False Claims Acts

MINNEAPOLIS – Mark Sand & Gravel Co. has agreed to pay \$1.75 million in damages for allegedly violating the federal False Claims Act and the Minnesota False Claims Act, by using unauthorized gravel materials in connection with several federally-funded road construction projects administered by the Minnesota Department of Transportation.

According to the allegations, between 2013 and 2015, Mark Sand & Gravel Co. performed substantial work on three separate federally-funded road construction projects – for portions of Trunk Highways 34, 59/10, and 78 – in or near Detroit Lakes, Minnesota. All such projects are required, by law and contract, to be performed in accordance with detailed terms and specifications using only approved materials. The government contends Mark Sand & Gravel Co. failed to follow contract specifications by using unauthorized and substandard materials, namely waste or shale rock included in the gravel mix for the projects, and making materially false claims and statements in connection with its use of those materials. The proceeds of the settlement will be divided by the federal and state governments according to the original funding of the projects.

"Failing to uphold contractual obligations by agreeing to do one thing but then doing another is not acceptable," said Acting U.S. Attorney W. Anders Folk. "We will continue to use the False Claims Act and other tools at our disposal to ensure that contractors act with transparency and do the work they promised to do."

"Performing road construction projects funded by the U. S. Department of Transportation comes with a set of detailed terms and specifications. When companies fail to follow contract specifications, use unauthorized materials, and make false statements concerning the quality of materials, the integrity of the work being performed is compromised," said Andrea M. Kropf, Special Agent-In-Charge, Midwestern Region, Department of Transportation Office of Inspector General. "Today's settlement signals our commitment to ensuring the integrity of the programs designed to maintain and improve our nation's transportation infrastructure."

This case was jointly investigated by the Office of Inspector General of the U.S. Department of Transportation and the Minnesota Department of Transportation, and handled by the Affirmative Civil Enforcement unit of the U.S. Attorney's Office for the District of Minnesota, as well as the Minnesota Attorney General's Office.

The claims resolved by the settlement are allegations only; there has been no determination of liability.

Topic(s):

False Claims Act

Component(s):

[USAO - Minnesota](#)

Updated June 4, 2021

EXHIBIT H



PURCHASE REQUEST FORM

Today's Date: 3/31/2017 Job #: STOCK

Stock: YES / NO Number Currently in Stock: 0

Reason for Request: NEEDED FOR JOBS

Date Needed By: 3/31/17 Priority: 1 2 3 4 5

Vendor: Lindsay Transport

Description	Quantity	Unit Price	Total
X Lite Kits	840	740. ⁰⁰	\$621,600. ⁰⁰
X Lite Hardware	35	40. ⁰⁰	1400. ⁰⁰
See attached	70	60. ⁰⁰	4200. ⁰⁰
Sales Tax			
Fuel Surcharge			
Delivery Charge			

TOTAL PURCHASE PRICE: \$627,200.⁰⁰

Requested By: Heater Cabrera Date: 3/31/17

Approved: [Signature] Date: 3/31/17

NOTE: THIS FORM MUST BE APPROVED BY BARBARA BEFORE ORDER CAN BE PLACED. THANK-YOU!



505 Crown Point Ave OMAHA, NE 68110
PHONE: 800-829-5300 FAX: 402-933-6178

Sales Quote

****Quote Valid for 30 Days from Inquiry Date listed below****

Sales Quote Number: SQ-13572

Page No: 1

Sell To :

DeLucca Fence Company, Inc.
5 Old Ferry Rd
METHUEN, MA 01844
United States of America

Ship To :

DeLucca Fence Company, Inc.
Hector @ 978-688-2877
5 Old Ferry Rd
METHUEN, MA 01844
United States of America

Customer No: 100418
SalesPerson: Ryan Samek

Inquiry Date: 03/21/16

Terms: N60

Effective Date: 03/15/16

Date Ordered : 03/21/16

Date Scheduled : 01/01/20

Discount % : 0.00

P.O. No. : XLITE

Shipping Comment:

Payment Terms : N60

Sales Person Code : RS

Shipping Terms : FCA-FACTORY

Exit Point

Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	XLTKUS				
	X-Lite Tangent Distributor Kit	Each	840	740.00	621,600.00

X-Lite Tangent Distributor Kit

Pre Paid Freight

PD20170331 RS

TERMS: Draw PO- released to Ryan or
CS

Must deliver 7 TL's by 12/31/17

Full Trucks Only Mix/ Match permitted

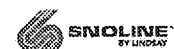
Max @ TBD

Subtotal: 621,600.00

Invoice Discount: 0.00

Total Sales Tax: 0.00

TOTAL (USD) : 621,600.00





505 Crown Point Ave OMAHA, NE 68110
PHONE: 800-829-5300 FAX: 402-933-6178

Sales Quote

****Quote Valid for 30 Days from Inquiry Date listed below****

Sales Quote Number: SQ-13572
Page No: 1

Sell To :

DeLucca Fence Company, Inc.
5 Old Ferry Rd
METHUEN, MA 01844
United States of America

Ship To :

DeLucca Fence Company, Inc.
Hector @ 978-688-2877
5 Old Ferry Rd
METHUEN, MA 01844
United States of America

Customer No: 100418
SalesPerson: Ryan Samek

Inquiry Date: 03/21/16
Terms: N60
Effective Date: 03/15/16

Date Ordered : 03/21/16
Date Scheduled : 01/01/20
Discount % : 0.00
P.O. No. : XLITE

Shipping Comment:

Payment Terms : N60
Sales Person Code : RS
Shipping Terms : FCA-FACTORY
Exit Point

Item No.	Description	Unit	Quantity	Unit Price	Total Price
XLTKUS	X-Lite Tangent Distributor Kit	Each	840	740.00	621,600.00

X-Lite Tangent Distributor Kit

Pre Paid Freight

PD20170331 RS

TERMS: Draw PO- released to Ryan or CS

Must deliver 7 TL's by 12/31/17

Full Trucks Only Mix/ Match permitted

Max @ TBD

Subtotal: 621,600.00
Invoice Discount: 0.00
Total Sales Tax: 0.00
TOTAL (USD) : 621,600.00





505 Crown Point Ave
Omaha, NE 68114

Customer:

Delucca Fence Company, Inc.

Sales Order:

22633

Customer PO:

TL 5

BOL#:

20160829

Order Quantity:

120

System

XLTKUS

Print Date:

8/29/2016

Shipped To:

NC

CERTIFICATE OF COMPLIANCE

Lindsay Transportation Solutions certifies that the following order has been manufactured in accordance with the specifications set forth in NCHRP-350 standards.

Pieces	Description	Item Number
120	XLITE, CRIMPED POST HOLES, GALV	BSI-1310027-00
120	POST II, X-LITE, GALV	BSI-1012086-00
120	SLIDER PANEL, FRONT, XLITE, GALV	BSI-1012093-00
120	Slider Bracket, X-Lite	BSI-1012090-00
120	BACK SLIDER PANEL, X-LITE, GALV	BSI-1012096-00
240	Ground Strut Assembly, X-Lite	BSI-1101209-00
120	Ground Strut Angle, GALV	BSI-1012098-00
240	Kit, X-Tension Shear Bolt,	K080123
120	IMPACT HEAD, X-LITE, GALV	BSI-1012103-00
120	Cable Anchor Assembly, X-Lite	BSI-1012104-00
120	Soil Plate, 18x18, Galv,	BSI-1312100-00
120	X-Lite Distributor HW Kit	BSI-1410022-KT
120	X-Lite Tangent Installation	MANXLT
120	XLITE, CRIMPED POST SLOTS, GALV	BSI-1310024-00

CERTIFICATION NOTES

ALL SYSTEMS ARE NCHRP 350 COMPLIANT

ALL STEEL USED WAS MELTED AND MANUFACTURED IN THE USA AND COMPLIES WITH THE BUY AMERICA ACT

ALL GUARDRAIL MEETS AASHTO M-180, ALL STRUCTURAL STEEL MEETS ASTM A36

ALL COATINGS AND PROCESSES OF THE STEEL ARE IN FULL COMPLIANCE WITH THE BUY AMERICA ACT

ALL MAJOR COMPONENTS (IF GALVANIZED) WERE HOT DIPPED GALVANIZED AND CONFORM TO ASTM A-123

CABLE ASSEMBLY CONFORMS TO AASHTO FCA01. MINIMUM BREAK STRENGTH OF 42,700 POUNDS.



505 Crown Point Ave
Omaha, NE 68114

Customer:

Delucca Fence Company, Inc.

Sales Order:

22633

Customer PO:

TL 5

BOL#:

20160829

Order Quantity:

120

System

XLTKUS

Print Date:

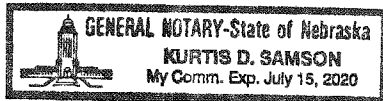
8/29/2016

Shipped To:

NC

CERTIFICATE OF COMPLIANCE

Lindsay Transportation Solutions certifies that the following order has been manufactured in accordance with the specifications set forth in NCHRP-350 standards.



State of Nebraska, County of Douglas

Sworn and Subscribed before me the 1st day of September 2016

Notary Public:

Kurtis D. Samson

Commission Expires:

July 15, 2020

Lindsay Transportation Solutions

Certified By:

Andrew Lucare 8/6/16

Quality Assurance



505 Crown Point Ave
Omaha, NE 68114

Customer:

Delucca Fence Company, Inc.

Sales Order:

22633

Customer PO:

TL 4

BOL#:

20160829

Order Quantity:

120

System

XLTKUS

Print Date:

8/29/2016

Shipped To:

NC

CERTIFICATE OF COMPLIANCE

Lindsay Transportation Solutions certifies that the following order has been manufactured in accordance with the specifications set forth in NCHRP-350 standards.

Pieces	Description	Item Number
120	XLITE, CRIMPED POST HOLES, GALV	BSI-1310027-00
120	POST II, X-LITE, GALV	BSI-1012086-00
120	SLIDER PANEL, FRONT, XLITE, GALV	BSI-1012093-00
120	Slider Bracket, X-Lite	BSI-1012090-00
120	BACK SLIDER PANEL, X-LITE, GALV	BSI-1012096-00
240	Ground Strut Assembly, X-Lite	BSI-1101209-00
120	Ground Strut Angle, GALV	BSI-1012098-00
240	Kit, X-Tension Shear Bolt,	K080123
120	IMPACT HEAD, X-LITE, GALV	BSI-1012103-00
120	Cable Anchor Assembly, X-Lite	BSI-1012104-00
120	Soil Plate, 18x18, Galv,	BSI-1312100-00
120	X-Lite Distributor HW Kit	BSI-1410022-KT
120	X-Lite Tangent Installation	MANXLT
120	XLITE, CRIMPED POST SLOTS, GALV	BSI-1310024-00

CERTIFICATION NOTES

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ALL GUARDRAIL MEETS AASHTO M-180, ALL STRUCTURAL STEEL MEETS ASTM A36

ALL COATINGS AND PROCESSES OF THE STEEL ARE IN FULL COMPLIANCE WITH THE BUY AMERICA ACT

ALL MAJOR COMPONENTS (IF GALVANIZED) WERE HOT DIPPED GALVANIZED AND CONFORM TO ASTM A-123

CABLE ASSEMBLY CONFORMS TO AASHTO FCA01. MINIMUM BREAK STRENGTH OF 42,700 POUNDS.



505 Crown Point Ave
Omaha, NE 68114

Customer:

Delucca Fence Company, Inc.

Sales Order:

22633

Customer PO:

TL 4

BOL#:

20160829

Order Quantity:

120

System

XLTKUS

Print Date:

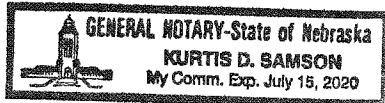
8/29/2016

Shipped To:

NC

CERTIFICATE OF COMPLIANCE

Lindsay Transportation Solutions certifies that the following order has been manufactured in accordance with the specifications set forth in NCHRP-350 standards.



State of Nebraska, County of Douglas

Sworn and Subscribed before me the 1st day of September 2016

Notary Public:

Kurtis D. Samson

Commission Expires:

July 15, 2020

Lindsay Transportation Solutions

Certified By:

Andrew Lucas 9/6/16

Quality Assurance

SALES ORDER CONFIRMATION**Order Number: SO-022633**

Page: 1

Lindsay Transportation Solutions Sales and Service, LLC

Sold To: 100418

DeLucca Fence Company, Inc.
 5 Old Ferry Rd
 METHUEN, MA 01844
 United States of America

Sales Order Date : 08/25/16
 Date Scheduled : 08/29/16
 P.O. No. :
 Payment Terms : Net 75 Days
 Sales Person Code RS

Requested Date
 Promised Date :
 Discount % : 0.00
 Type : TRD

Ship to:

DeLucca Fence Company, Inc.
 Hector @ 978-688-2877
 5 Old Ferry Rd
 METHUEN, MA 01844
 United States of America

Shipping Terms : FCA-FACTORY

Exit Point :

Shipping Comments:

Item No.	Description	Unit	Quantity	Unit Price	Total
XLTKUS	X-Lite Tangent Distributor Kit X-Lite Tangent Distributor Kit Pre Paid Freight PD20160321 RS	Each	120	715.00	85,800.00

Subtotal: 85,800.00

Total Sales Tax: 0.00

Order Total: 85,800.00



505 Crown Point Ave
Omaha, NE 68114

Customer:

Delucca Fence Co Inc.

Sales Order:

22586

Customer PO:

TL 3

BOL#:

20160823

Order Quantity:

120

System

XLTKUS

Print Date:

8/23/2016

Shipped To:

MA

CERTIFICATE OF COMPLIANCE

Lindsay Transportation Solutions certifies that the following order has been manufactured in accordance with the specifications set forth in NCHRP-350 standards.

Pieces	Description	Item Number
120	XLITE, CRIMPED POST HOLES, GALV	BSI-1310027-00
120	POST II, X-LITE, GALV	BSI-1012086-00
120	SLIDER PANEL, FRONT, XLITE, GALV	BSI-1012093-00
120	Slider Bracket, X-Lite	BSI-1012090-00
120	BACK SLIDER PANEL, X-LITE, GALV	BSI-1012096-00
240	Ground Strut Assembly, X-Lite	BSI-1101209-00
120	Ground Strut Angle, GALV	BSI-1012098-00
240	Kit, X-Tension Shear Bolt,	K080123
120	IMPACT HEAD, X-LITE, GALV	BSI-1012103-00
120	Cable Anchor Assembly, X-Lite	BSI-1012104-00
120	Soil Plate, 18x18, Galv,	BSI-1312100-00
120	X-Lite Distributor HW Kit	BSI-1410022-KT
120	X-Lite Tangent Installation	MANXLT
120	XLITE, CRIMPED POST SLOTS, GALV	BSI-1310024-00

CERTIFICATION NOTES

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ALL GUARDRAIL MEETS AASHTO M-180, ALL STRUCTURAL STEEL MEETS ASTM A36

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ALL MAJOR COMPONENTS (IF GALVANIZED) WERE HOT DIPPED GALVANIZED AND CONFORM TO ASTM A-123

CABLE ASSEMBLY CONFORMS TO AASHTO FCA01. MINIMUM BREAK STRENGTH OF 42,700 POUNDS.



505 Crown Point Ave
Omaha, NE 68114

Customer:

Delucca Fence Company, Inc.

Sales Order:

22049

Customer PO:

XLITE DRAW 2

BOL#:

20160623

Order Quantity:

120

System

XLTKUS

Print Date:

6/24/2016

Shipped To:

MA

CERTIFICATE OF COMPLIANCE

Lindsay Transportation Solutions certifies that the following order has been manufactured in accordance with the specifications set forth in NCHRP-350 standards.

Pieces	Description	Item Number
120	XLITE, CRIMPED POST HOLES, GALV	BSI-1310027-00
120	POST II, X-LITE, GALV	BSI-1012086-00
120	SLIDER PANEL, FRONT, XLITE, GALV	BSI-1012093-00
120	Slider Bracket, X-Lite	BSI-1012090-00
120	BACK SLIDER PANEL, X-LITE, GALV	BSI-1012096-00
240	Ground Strut Assembly, X-Lite	BSI-1101209-00
120	Ground Strut Angle, GALV	BSI-1012098-00
240	Kit, X-Tension Shear Bolt,	K080123
120	IMPACT HEAD, X-LITE, GALV	BSI-1012103-00
120	Cable Anchor Assembly, X-Lite	BSI-1012104-00
120	Soil Plate, 18x18, Galv,	BSI-1312100-00
120	X-Lite Distributor HW Kit	BSI-1410022-KT
120	X-Lite Tangent Installation	MANXLT
120	XLITE, CRIMPED POST SLOTS, GALV	BSI-1310024-00

CERTIFICATION NOTES

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CABLE ASSEMBLY CONFORMS TO AASHTO FCA01. MINIMUM BREAK STRENGTH OF 42,700 POUNDS.



505 Crown Point Ave
Omaha, NE 68114

Customer:

Delucca Fence Company, Inc.

Sales Order:

22049

Customer PO:

XLITE DRAW 2

BOL#:

20160623

Order Quantity:

120

System

XLTKUS

Print Date:

6/24/2016

Shipped To:

MA

CERTIFICATE OF COMPLIANCE

Lindsay Transportation Solutions certifies that the following order has been manufactured in accordance with the specifications set forth in NCHRP-350 standards.

State of Nebraska, County of Douglas

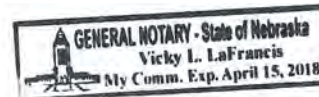
Sworn and Subscribed before me the 27th day of June 2016

Notary Public:

Vicky LaFrancis

Commission Expires:

4/15/18



Lindsay Transportation Solutions

Certified By:

Andrew Lucas 6/27/16

Quality Assurance



SALES ORDER CONFIRMATION

Order Number: SO-024731

Page: 1

Lindsay Transportation Solutions Sales and Service, LLC

Sold To: 100418

DeLucca Fence Company, Inc.
5 Old Ferry Rd
METHUEN, MA 01844
United States of America

Sales Order Date : 03/31/17
Date Scheduled : 04/05/17
P.O. No. : FTL 1 & HW
Payment Terms : N60
Sales Person Code : RS

Requested Date
Promised Date :
Discount % : 0.00
Type : TRD

Ship to:

DeLucca Fence Company, Inc.
Hector @ 978-688-2877
5 Old Ferry Rd
METHUEN, MA 01844
United States of America

Shipping Terms : FCA-FACTORY

Exit Point :

Shipping Comments:

Item No.	Description	Unit	Quantity	Unit Price	Total
BSI-1410022-KT	X-Lite Distributor HW Kit	Each	35	40.00	1,400.00
	X-Lite Distributor HW Kit				
K080123	Kit, X-Tension Shear Bolt,	Each	70	60.00	4,200.00
XLTKUS	X-Lite Tangent Distributor Kit	Each	120	740.00	88,800.00
	X-Lite Tangent Distributor Kit				
	PD20170331 RS				
	Pre Paid Freight				

Subtotal: 94,400.00

Total Sales Tax: 0.00

Order Total: 94,400.00

1000620023

5201611816

Bullington Construction, Inc.

164 American Drive
Oakboro, NC 28129-6700
(704) 486-0379 - Phone
(704) 486-0389 - Fax

**Invoice**

DATE	INVOICE #
9/14/2016	123201

COUNTY
CALDWELL

JOB INFORMATION

PO #: 3000039250
REQUIS #: 11628466
SITE # 02
FROM NEW FARM RD SR #1764 ON
US 321 NORTH 1.3 MILES TO JOB #2.

BILL TO

NCDOT
KENNY HEAVNER PE
500 PLEASANT HILL RD
LENOIR NC 28645

BCI JOB #

BC03212

SERVICE DATE

8/31/2016

TERMS

DUE ON RECEIPT

DUE DATE

9/14/2016

LINE ITEM	DESCRIPTION	AMOUNT	UNIT	UNIT PRICE	CHARGES
12	GRAU - TYPE 350 (X-LITE)	1	EA	2,050.00	2,050.00
30	TRAFFIC CONTROL - FULL LANE CLOSURE	1	EA	1.00	1.00
<p>11.101420 3120C 1204222</p> <p><input checked="" type="checkbox"/> APPROVED <i>[Signature]</i> 10-14-2016</p>					
<p>Bullington Construction, Inc. is an Equal Employment Opportunity Employer!</p>		TOTAL:		\$2,051.00	
		PAYMENTS:		\$0.00	
		BALANCE:		\$2,051.00	

wgrz.com

10/22/16

PAVILION DRAINAGE
A NATIVE AMERICAN BUSINESS

2016/10/14 PM 1:57

INVOICE

Number: **ERIEHA16*04**

Date: **10/08/2016**

Bill To: **COUNTY OF ERIE DPW, DIVISION OF HIGHWAYS
95 FRANKLIN STREET, ROOM 1425
BUFFALO, NY 14202**

Customer Code: **ECCDPW**

Purchase Order No: **4600020314**

Job: **ERIE COUNTY - HARLEM ROAD
BLANKET PO - VARIOUS LOCATIONS AS
REQUESTED AND DESCRIBED BELOW**

Remarks: **FROM DRAW REQUEST BILLING ENTRY**

Progress Billing Through: **10/08/2016**

Quantity	Description	Unit Price	Amount
3.00	BASELINE ROAD 70000, 100900 REPLACE ET ASSEMBLIES WITH X-LITE ASSEMBLIES ALSO INCLUDES VARIOUS REPAIRS AS DIRECTED	\$3,194.02	\$9,582.06
1.00	70000, 101000 BETWEEN ALVIN RD AND WEBB RD SW QUADRANT OF ALVIN RD REPLACE CRASH DAMAGED GUIDE RAIL PANELS AND AFFECTED POSTS	\$537.50	\$537.50

PAVILION, NY 14525

	\$10,119.56
	\$0.00
	\$0.00
	\$10,119.56

PAVILION, NY 14525

Remarks: FROM DRAW REQUEST BILL	
Quantity	Description
BASELINE ROAD	
3.00	70000.100900 REPLACE ET ASSEMBLIES WITH X-LITE ALSO INCLUDES VARIOUS REPAIRS AS
1.00	70000.101000 BETWEEN ALVIN RD AND WEBB RD SW QUADRANT OF ALVIN RD REPLACE CRASH DAMAGED GUIDE RA

EXHIBIT I



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

COMMISSIONER'S OFFICE
SUITE 700, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-2848

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

April 4, 2017

Ms. Pamela K. Kordenbrock
Division Administrator
Federal Highway Administration-Tennessee
404 BNA Drive, Suite 508
Nashville, Tennessee 37217

**Re: Lindsey Transportation Solutions
X-Lite End Terminal**

Dear Ms. Kordenbrock:

The purpose of this correspondence is to inform the Federal Highway Administration (FHWA) of recent issues that the Tennessee Department of Transportation (TDOT) has experienced with the above referenced energy absorbing tangential guardrail end terminal.

As you know, FHWA issued a letter of eligibility for the X-Lite Flared Terminal and X-Lite Tangent Terminal on September 7, 2011, thus these products had been properly evaluated by NCHRP-350 TL-3 evaluation criteria. As stated in the letter from Michael S. Griffith, FHWA Safety Office, ***"Both systems described above and detailed in the enclosed drawings are acceptable for use on the NHS under the range of conditions tested."*** Subsequent modifications of the end terminals led to additional approvals by FHWA dated March 29, 2013 and January 28, 2014. As a result of the acceptance letters, the X-Lite terminals were added to TDOT's Qualified Product List (QPL) in June, 2013.

In June, 2016, TDOT's field staff expressed concerns to our Headquarters Construction Division regarding installations of X-Lite terminals involving two (2) crashes resulting in three (3) fatalities where the guardrail penetrated the vehicle cabin. Between July and October, 2016, TDOT staff conducted field inspections and had discussions with Lindsey Transportation Solutions executives and staff several times attempting to clarify guardrail end terminal installation details. Lindsey Transportation Solutions was unable to resolve our concerns regarding a lack of bolt torque specifications in their installation instructions. We note that in FHWA's September 9, 2011 acceptance letter regarding the X-Lite Terminal, under the standard provisions of acceptance, that "the manufacturer is expected to supply potential users with sufficient information on design and installation requirements to ensure proper performance."

Ms. Pamela Kordenbrock

April 4, 2017

Page 2

TDOT concluded that unclear instructions *may* cause installation deficiencies, which could result in the terminal performing differently from the original tested conditions.

As a result of unclear installation instructions, and TDOT's migration to the 2016 edition of AASHTO's Manual for Assessing Safety Hardware (MASH), the X-Lite (TX) Terminal was removed from TDOT's QPL on October 25, 2016.

Additionally, our experience with the X-Lite Terminals has revealed in-service performance that we believe does not provide adequate protection of motorists on our network of roads. Our concern is based on crashes where we have observed the impact head of the unit separating horizontally from the adjacent w-beam guardrail, sliding past this adjacent section of w-beam which then could and has penetrated a vehicle cabin. Since the end terminal was removed from our QPL, two (2) additional crashes resulting in fatalities and other non-fatality crashes have prompted TDOT to take further action.

We have made the decision to remove installed X-Lite (TX) terminals from the state highway systems through contracts in our March 31, 2017 bid letting.

In FHWA's September 9, 2011 acceptance letter regarding the X-Lite Terminal, under the standard provisions of acceptance, it is noted that "if in-service performance reveals unacceptable safety problems that FHWA reserves its rights to modify or revoke acceptance."

It is also our understanding that the Virginia Department of Transportation (VDOT) removed the Lindsey Transportation Solutions X-Lite End Terminals from their Approved Products List on September 1, 2016.

While Tennessee will soon see these products removed from the state highway system, in light of these circumstances, I believe it appropriate to notify FHWA of our inability to receive satisfactory installation information from the manufacturer and that in-service performance of this device is resulting in unacceptable safety levels for the Department. We are available to provide additional information with regard to these concerns should you request them.

Sincerely,



John C. Schroer
Commissioner

JCS/CER/jc

Ms. Pamela Kordenbrock

April 4, 2017

Page 3

cc: Mr. Paul D. Degges, P.E., Deputy Commissioner/Chief Engineer
Mr. John Reinbold, Legal Counsel
Mr. Jeff C. Jones, P.E, Assistant Chief Engineer-Design
Mr. Chuck Rychen, Assistant Chief Engineer-Operations
Mr. Will Reid, P.E., Director of Construction
Assistant Chief Engineers/ Regional Directors
Mr. Bud Wright AASHTO

EXHIBIT J

From: Gerrit Dyke [/O=LINDSAY/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=GDYKE]
Sent: 6/19/2015 7:32:12 PM
To: fhwaeligibilityinbox@dot.gov
Subject: FHWA Eligibility FORM
Attachments: LindsayTransportationSolutions_EndTerminal_X-Lite_06192015.pdf; FHWA X-Lite Slider Panel.pdf

The attached file contains data that was entered into a form. It is not the form itself.

The recipient of this data file should save it locally with a unique name. Adobe Acrobat Professional 7 or later can process this data by importing it back into the blank form or creating a spreadsheet from several data files. See Help in Adobe Acrobat Professional 7 or later for more details.

Request for Federal Aid Reimbursement Eligibility Of Highway Safety Hardware

Submitter	Date of Request:	June 19, 2015	<input checked="" type="radio"/> New <input type="radio"/> Resubmission
	Name:	Gerrit Dyke, P.E.	
	Company:	Lindsay Transportation Solutions	
	Address:	180 River Road, Rio Vista, CA 94571	
	Country:	USA	
	To:	Michael S. Griffith, Director FHWA, Office of Safety Technologies	

I request the following devices be considered eligible for reimbursement under the Federal-aid highway program.

Help

System Type	Submission Type	Device Name / Variant	Testing Criterion	Test Level
'CC': Crash Cushions, Attenuators, & Terminals	<input type="radio"/> Physical Crash Testing <input type="radio"/> FEA & V&V Analysis <input checked="" type="radio"/> Engineering Analysis	X-Lite Tangent (TX), X-Lite Flared (FX)	NCHRP Report 350	TL3

By submitting this request for review and evaluation by the Federal Highway Administration, I certify that the product(s) was (were) tested in conformity with the NCHRP Report 350 (Report 350) and that the evaluation results meet the appropriate evaluation criteria in the Report 350.

Identification of the individual or organization responsible for the product:

Contact Name:	Gerrit Dyke, P.E.	Same as Submitter <input checked="" type="checkbox"/>
Company Name:	Lindsay Transportation Solutions	Same as Submitter <input checked="" type="checkbox"/>
Address:	180 River Road, Rio Vista, CA 94571	Same as Submitter <input checked="" type="checkbox"/>
Country:	USA	Same as Submitter <input checked="" type="checkbox"/>

PRODUCT DESCRIPTION

<input type="radio"/> New Hardware	<input checked="" type="radio"/> Modification to Existing Hardware	Non-Significant - Effect is positive or Inconsequential
<p>The proposed modification to the X-Lite (FX/TX) involves a minor improvement to the Slider Panel manufacturing process. The Slider Panel is shown in the attached system drawing .pdf file titled (XLTSUS) item number 5. The slider panel is made up of two guardrail pieces that are welded together. The two components are shown in the attached .pdf files (BSI-1308019-00 and BSI-1012092-00). The proposed modification is to combine the two components into one stamped component as shown in the attached .pdf file (BSI-1411078-00). The material mechanical properties and the physical dimensions remain unchanged. Therefore, the modification represents no change to the function, capacity or performance of the component and system.</p> <p>The modification will improve the consistency of the part and reduce dimensional guardrail material variances and eliminate welding variances.</p>		

CRASH TESTING

A brief description of each crash test and its result:

Required Test Number	Narrative Description	Evaluation Results
3-30 (820C)		
S3-30 (700C)		
3-31 (2000P)		
3-32 (820C)		
S3-32 (700C)		
3-33 (2000P)		
3-34 (820C)		
S3-34 (700C)		
3-35 (2000P)		
3-36 (820C)		
S3-36 (700C)		
3-37 (2000P)		
3-38 (2000P)		
3-39 (2000P)		
3-40 (2000P)		
S3-40 (700C)		
3-41 (2000P)		
3-42 (820C)		
S3-42 (700C)		
3-43 (2000P)		
3-44 (2000P)		

Full Scale Crash Testing was done in compliance with Report 350 by the following accredited crash test laboratory (cite the laboratory's accreditation status as noted in the crash test reports.):

Testing Laboratory's signature concurs that these modifications are considered Non-Significant and the effect is positive or inconsequential.		
Laboratory Contact Signature:	Joseph Nagy	<small>Digitally signed by Joseph Nagy Date: 2015.06.19 12:18:22 -07'00'</small>
Laboratory Name:	Safe Technologies, Inc.	
Laboratory Contact:	Joseph Nagy	Same as Submitter <input type="checkbox"/>
Address:	170 River Road, Rio Vista, CA 94571	Same as Submitter <input type="checkbox"/>
Country:	USA	Same as Submitter <input type="checkbox"/>
Accreditation Certificate Number and Date:	1851.01, Valid through March 31, 2016	

Submitter Signature*: **Gerrit Dyke** Digitally signed by Gerrit Dyke
Date: 2015.06.19 12:20:30 -07'00'

Submit Form

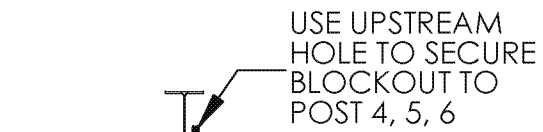
ATTACHMENTS

Attach to this form:

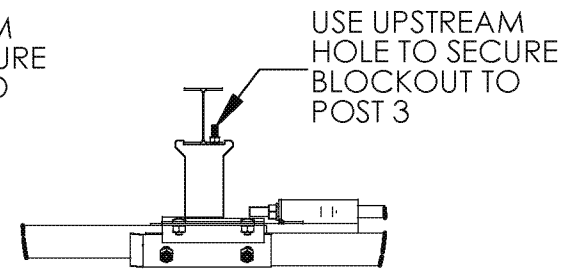
- 1) A copy of the full test report, video, and a Test Data Summary Sheet for each test conducted in support of this request.
- 2) A drawing or drawings of the device(s) that conform to the Task Force-13 Drawing Specifications [[Hardware Guide Drawing Standards](#)]. For proprietary products, a single isometric line drawing is usually acceptable to illustrate the product, with detailed specifications, intended use, and contact information provided on the reverse. Additional drawings (not in TF-13 format) showing details that are key to understanding the performance of the device should also be submitted to facilitate our review.

FHWA Official Business Only:

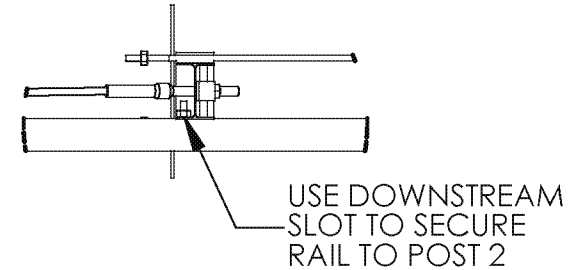
Eligibility Letter		AASHTO TF13	
Number	Date	Designator	Key Words



**DETAIL E
(SCALE 1:20)**

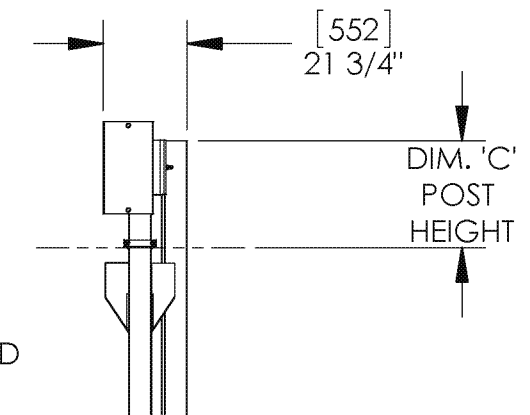
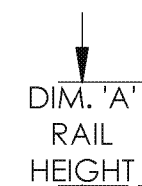
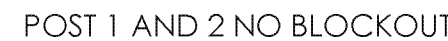
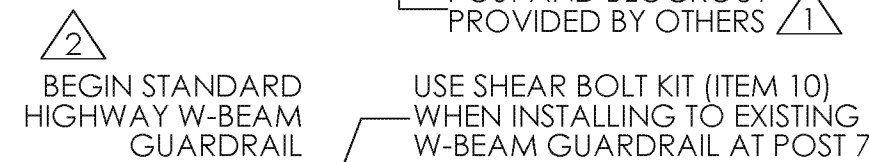
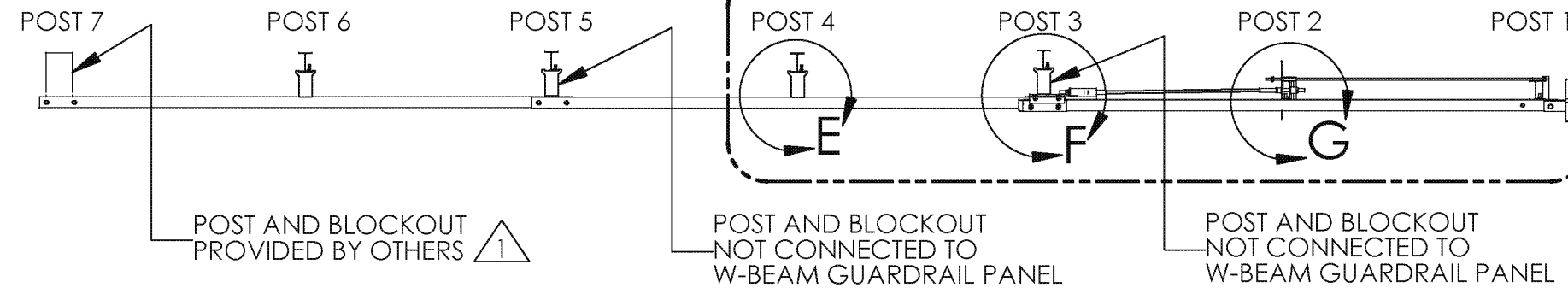


**DETAIL F
(SCALE 1:20)**



**DETAIL G
(SCALE 1:20)**

POSTS 4, 5 AND 6 ARE IN LINE.
OFFSET POST 3 FROM POST 4 PER DIMENSION SHOWN.
OFFSET POSTS 2 AND 1 FROM POST 4 PER DIMENSION SHOWN.
ALL DIMENSIONS ARE TO THE OUTSIDE FLANGE OF THE POSTS.

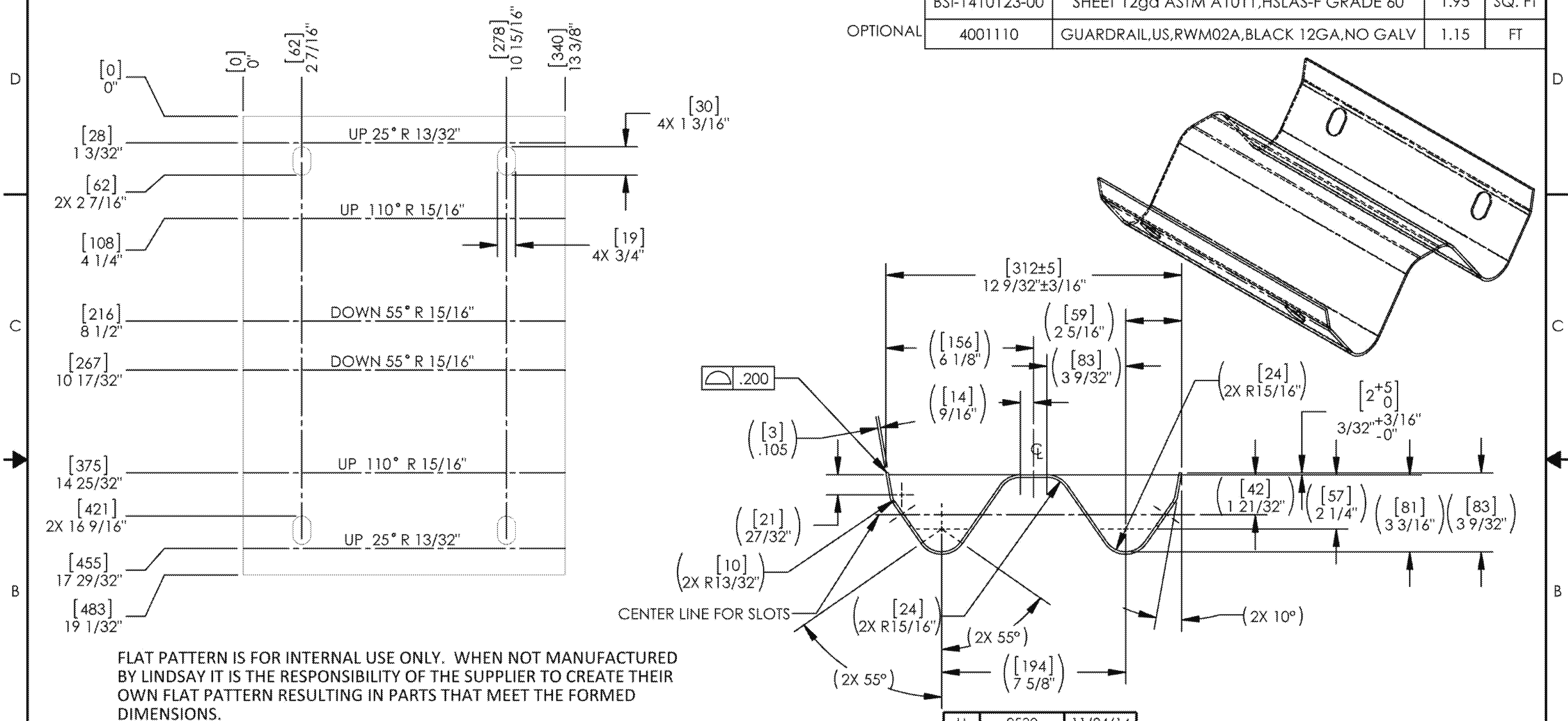


SYSTEM HEIGHT DIMENSIONS						
REFERENCE DIMENSIONS		INCHES	MM	OR	INCHES	MM
A	RAIL HEIGHT	27 5/8	700		31	787
B	HEAD HEIGHT	33 3/8	850		36 3/4	934
C	POST HEIGHT	28 1/4	720		31 3/4	805

SIZE B	DWG NO.	XLTSUS	REV. K
SCALE 1:50			SHEET 2 OF 2

OPTIONAL

No.	DESCRIPTION	QTY.	U/M
BSI-1410123-00	SHEET 12ga ASTM A1011,HSLAS-F GRADE 60	1.95	SQ. FT
4001110	GUARDRAIL,US,RWM02A,BLACK 12GA,NO GALV	1.15	FT



FLAT PATTERN IS FOR INTERNAL USE ONLY. WHEN NOT MANUFACTURED BY LINDSAY IT IS THE RESPONSIBILITY OF THE SUPPLIER TO CREATE THEIR OWN FLAT PATTERN RESULTING IN PARTS THAT MEET THE FORMED DIMENSIONS.

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	FRACTIONS	DECIMAL
	$\pm 1/16$	$\pm .003$
	ANGLES	$\pm 1/2^\circ$
	INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-1994	
APPROVALS		
DRAWN BY:	AEM	THIRD ANGLE PROJECTION
DRAWN DATE:	12/22/10	
APPR'D BY:	GAD	
APPR'D DATE:	02/25/11	DO NOT SCALE DRAWING

H	2530	11/24/14
G	2497	11/03/14
F	2453	10/7/14
E	2135	9/13/13
D	2113	8/21/13
C	2102	8/12/13
B	2020	3/14/13
A	1706	6/3/11
0	1664	2/25/11
REV	ECN#	DATE



BARRIER SYSTEMS
180 River Road
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www.barriersystemsinc.com

PANEL, SLIDER, X-LITE, HSLAS-F GRADE 60

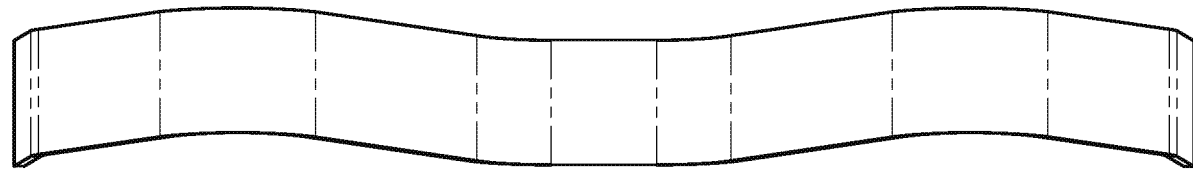
NOTES: UNLESS OTHERWISE SPECIFIED.

1. BREAK SHARP EDGES, DEBURR.

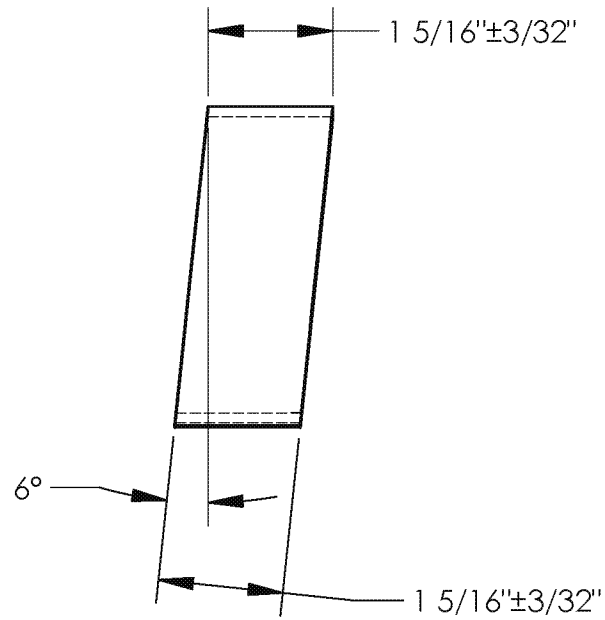
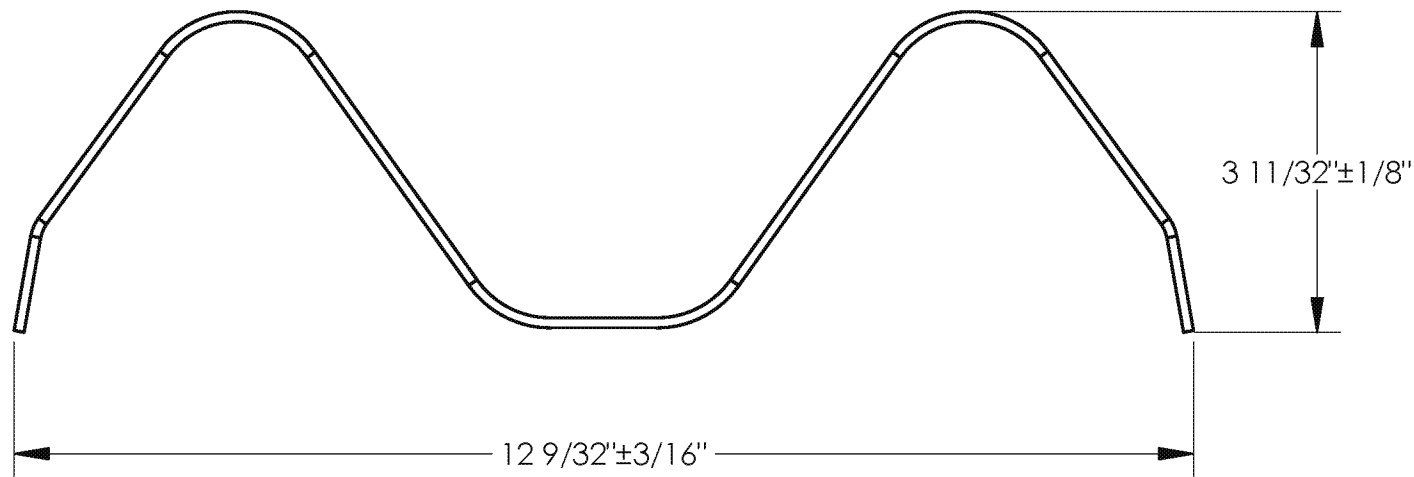
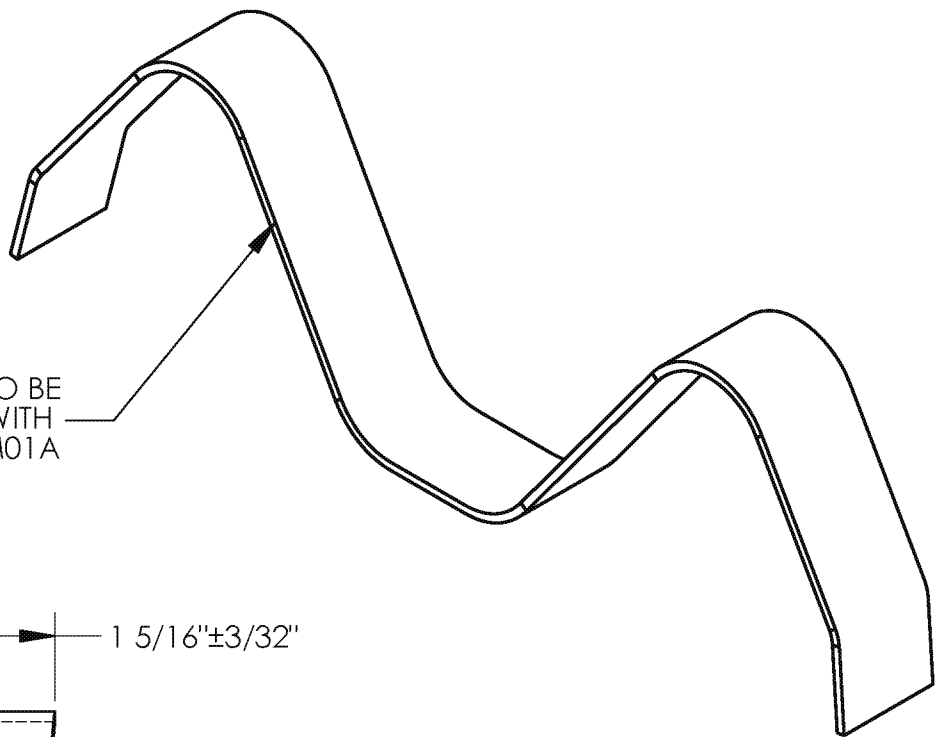
No.	Description	QTY	UOM
4001110	GUARDRAIL,US,RWM02A,BLACK	0.20	FT

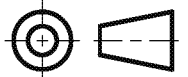
NOTES: UNLESS OTHERWISE SPECIFIED.

- 1. BREAK SHARP EDGES, DEBURR.
- 2. MAKE FROM AASHTO P/N: RWM01A



GUARDRAIL PROFILE TO BE
IN ACCORDANCE WITH
AASHTO P/N: RWM01A



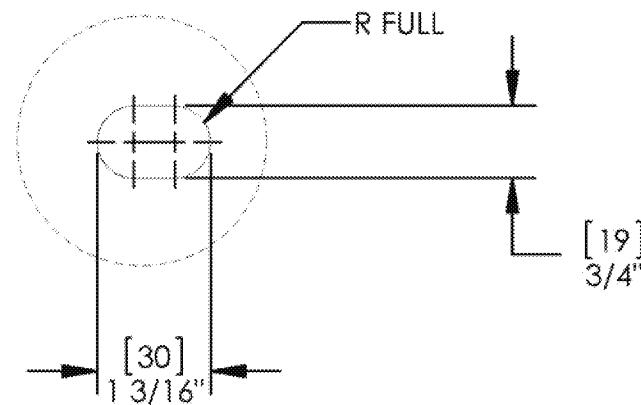
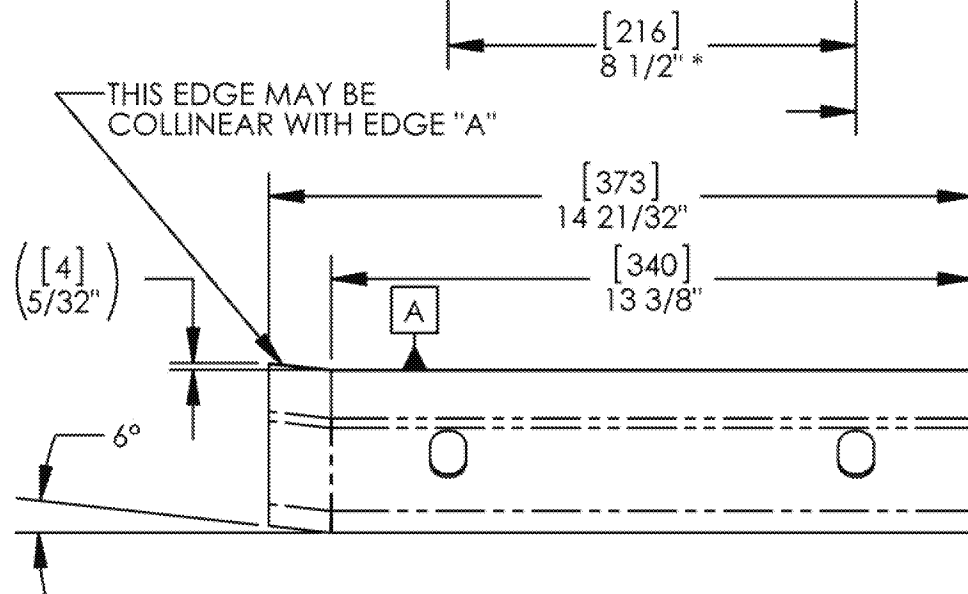
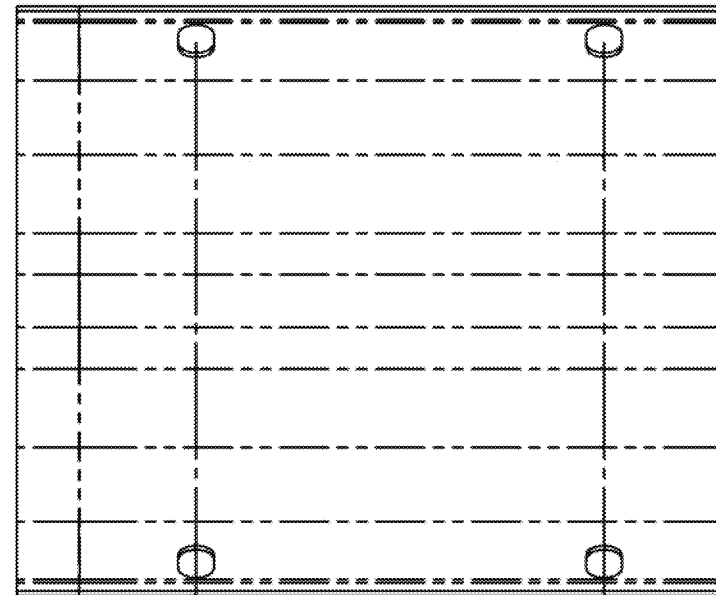
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NOTES: UNLESS OTHERWISE SPECIFIED.

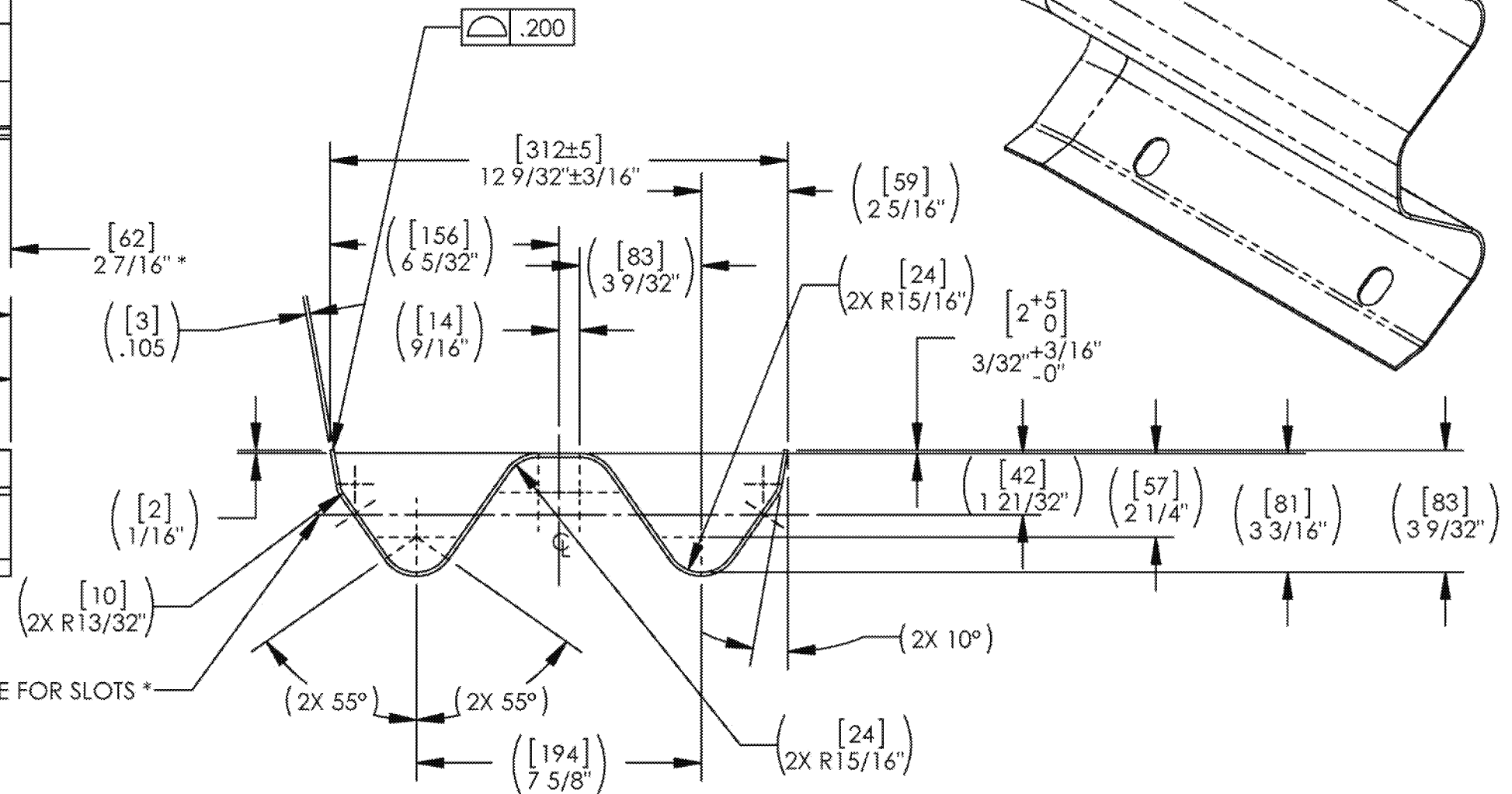
1. BREAK SHARP EDGES, DEBURR.
2. MATERIAL: HRS ASTM A1011, HSLAS-F GRADE 60. (LTS PN: BSI-1410123-00)
OR MUST MEET MECHANICAL PROPERTIES BELOW:

MIN YIELD STRENGTH: 60 KSI
MIN TENSILE STRENGTH: 70 KSI
MIN ELONGATION IN 2 INCHES: 22 PERCENT

3. MUST BE OF DOMESTIC USA ORIGIN.
4. A CERTIFICATE OF COMPLIANCE TO THE MATERIAL REQUIREMENTS SHALL BE SUPPLIED BY THE VENDOR.



CENTER LINE FOR SLOTS *



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DIMENSIONS ARE IN INCHES.
TOLERANCES ARE:

FRACTIONS DECIMAL ANGLES
1/16 .003 1/2°
XXX ±0.010

INTERPRET DIMENSIONS AND
TOLERANCES PER ASME
Y14.5-1994

APPROVALS

DRAWN BY: MESUD EMINIC

DRAWN DATE: 11/24/14

APPR'D BY: JOSEPH NAGY

APPR'D DATE: 11/24/14

THIRD ANGLE PROJECTION



DO NOT SCALE DRAWING



SLIDER PANEL, GUARDRAIL

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180 River Road
Rio Vista, CA 94571
Tel: 866-830-3691
www.barrriersystemsinc.com

SIZE

DWG NO.

B

2524

DATE

11/24/14

SCALE

1:4

REV

ECN#

DATE

11/24/14

SCALE

1:4

SHEET

1 OF 1

REV

A